animation:
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journal

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Editorial

This Special Issue of *animation: an interdisciplinary journal* is curated by Guest Editor Eric Herhuth. His article – 'The Politics of Animation and the Animation of Politics' – includes a detailed Introduction to the Special Issue and to the articles it contains, as well as an explanation of the meaning of the title of his own article. Herhuth also raises a set of questions (some familiar and others new) about animation as a 'minor aesthetic form' and 'bad object' or a problem of academic study, as well as reviewing recent publications that explore and offer new critical approaches to animation that repurpose or challenge its marginalisation to positive effect. Herhuth makes clear that the Special Issue makes no claim to comprehensively cover the theme of politics and animation; on the contrary, he states that the issue also offers a promising range of potential areas, analyses, critical theory and topics for further research, ensuring, in his words, that we 'cultivate a politics of animation' and 'maintain an animation of politics' (Herhuth, 2016, 11(1): 3–21.).

This Special Issue has its origins in presentations made at the Society for Cinema and Media Studies' annual conference in Montreal in 2015, where Herhuth organised two panels: 'Animation and Politics 1: Aesthetics and Theory' and 'Animation and Politics II: Bodies and Labor'. These panels were just two of almost a dozen panels on a diversity of topics and themes of 'animation', from digital FX and cognition to metamorphosis and colour. In addition to these animation-specific panels, there were a considerable number of other papers allocated to a wide range of thematic, historical, formal and aesthetic panel topics. We have previously published two Special Issues that were also based on organised panels at SCMS: 'Animating Space and Scalar Travels', guest edited by Sylvie Bissonnette (volume 9(2), 2014), and 'Animation, Pre- and Early Cinema, guest edited by Philippe Gauthier (volume 6(2), 2011). These issues are excellent collections of new research and expanded application of so-called film studies methodologies and wider approaches to animated film and media, and we will continue to welcome proposals for potential future Special Issues.

As research and doctoral projects and publications on animation continue to increase, we can observe a related narrowing of topical focus and writings on single films or filmmakers, rather than overarching claims for an undefined body of works. Academic engagement with animation is indeed on the rise, evident in the growth of the SCMS Animated Media Scholarly Interest Group (SIG); established in 2011 with initially just 31 members, two-thirds of whom were professors, the membership in January 2016 has reached 145 members, many of whom are postgraduate students. This development is also reflected in this journal's current issue, where the majority of authors have either recently completed their PhD studies or are currently doctoral candidates.

It was a pleasure working with Eric Herhuth on this Special Issue on 'Animation and Politics', and we hope you will engage with and enjoy the range of thought-provoking and informative articles it contains.

For the Editorial Team

Suzane Buchan, Editor

Reference

Herhuth E (2016) The politics of animation and the animation of politics. *animation: an interdisciplinary journal 11*(1), 11(1): 3–21.

The Politics of Animation and the Animation of Politics

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Abstract

This article demonstrates how political inquiry can guide the study of animation. It proceeds by investigating animation's minor status within film and media studies and then the expansion of its definition and conceptual associations. This expansion has philosophical implications, which are explored in this article through the work of Jeff Malpas and Bruno Latour. By examining how these philosophers discuss animation and animated examples – puppets, in particular – this article demonstrates a shift from thinking of animation as expressing mastery and illusion to thinking of animation as expressing transformation, heterogeneous action, and distributed agency. This shift challenges philosophy's opposition to rhetoric, poetics, and technology, and in turn challenges modern binaries between nature and culture, science and politics, reality and artifice, facts and fetishes, and it presents the world as animated. The author argues that this idea need not obfuscate the many different moving-image technologies that have been designated animation or cinema, and contends that some of these, such as animated cartoons, directly engage the confusion about animation caused by modern binaries. This argument proposes studying animation through multiple modes or lenses in order to prevent dominant realist modes of inquiry from stifling the uncertainty and pluralism that are central to animation's capacity for political expression.

Introduction to the Special Issue

How can political inquiry guide the study of animation? This Special Issue addresses the many valences of this question. Indeed, the articles included here explore a wide range of animation forms and contexts and do so from diverse and interdisciplinary scholarly approaches. These approaches range from regional and global industry studies to close examinations of individual films and the work of individual animators. The contexts and objects of interest include American cartoons, Hungarian collage animation, Japanese anime, Indian animation education, and digital

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animation and effects. Threaded through the Issue's articles are multiple lines of inquiry that examine animation production, labor, and aesthetics in relation to corresponding geo-political contexts, and that address, whether directly or indirectly, two related questions: What are the politics that structure the study of animation? How do different animation forms and practices contribute to political expression and political innovation? These inquiries presuppose a definition of politics that foregrounds disagreement and contention as much as, if not more than, formal structures of power and consensual social organization.

The Issue begins with an intervention into debates about whether or not animated cartoons present a view of the world. In a remarkable demonstration of close analysis, Hannah Frank examines the traces of labor and world that are presented through the photomechanical processes of cel animation production. Transitioning to today's digital landscape, Mihaela Mihailova investigates the persistence of exploitation, objectification, and inequality based on sex and gender that continue through motion and performance capture industry practices. Paul Flaig's analysis of *WALL-E* (Andrew Stanton, 2008) elaborates this discussion of digital production by detailing how the film presents a return to slapstick and physical labor while disavowing the post-Fordist ethos championed by Pixar Studios itself. Following Flaig's article, the Issue shifts to more regional considerations. Timothy Jones offers an investigation into animation education in India that examines how that country's approach to globalized media production informs the construction of identity for animators entering the field. Focusing on Hungarian animator Sándor Reisenbüchler, Paul Morton considers the globalist politics of Reisenbüchler's aesthetics in the context of communism's decline in Europe. The Special Issue concludes with Peter Paik's close reading of the Japanese animated film *Jin-Roh* (2000), which engages with the theoretical work of Thomas Lamarre and demonstrates how anime aesthetics function in support of the film's political thriller narrative.

The articles in this Special Issue explore the nexus of animation and politics in at least two directions: the politics of animation and the animation of politics. The former refers to the debates and contests that structure the study of animation with its many techniques and aesthetic forms. The latter refers to animation as a mode of political expression and innovation that addresses and interrogates (animates) a range of cultural, environmental, ideological, governmental, and personal conflicts. These two formulations can intersect, of course, and with significant real world implications; for instance, when animation's marginal status within film and media studies bolsters the expression of marginalized views and modes of being in animated media. I will say more about this minor aesthetic momentarily but, in general, debates about animation, what it is and what it is not, contribute to its capacity to explore a given subject matter. The contention and confusion surrounding 'animation' as a term and as a concept foment interest in it as a field of study and mode of artistic making. The fact that it is 'up for debate' gives it intellectual appeal as there appears to be plenty of intellectual work to be done. 'Animation' has a robust etymology and a wealth of denotations and connotations that vary between disciplines, but the term has expanded as a descriptor across transmedia landscapes. The many animation-related publications and the increasing number of conferences and symposia focusing on the topic are clear indications that the term does not have the limitations that it once had.[1] Theoretical efforts to remap the boundaries of animation can be found in media theory, animation theory, and film theory.[2]

The politics of animation within this media context results in large part from a paradoxical marginality: the term animation is at once capable of referring to all moving image media but, during the age of analog cinema at least, has been used in a narrow fashion to refer to cel and stop-motion animation techniques, and to refer to the genres and aesthetics of cartoons and abstract or avant-garde film. Rather than recount the history of the arguments about digital media's approximation to animation and the debates about whether or not cinema is a single moment in a longer history of

animation, I am interested in analyzing the complications and implications of remapping animation, especially in respect to its conceptual roots in modernity and political philosophy. Complementing the material, aesthetic, and geo-political specificity of the articles in this Special Issue, this conceptual approach considers how animation studies can expand to include multiple forms of specificity.

Animation as a moving concept

Examining animation at a conceptual level means attending first to animation as a functional unit at work in thinking and communicating rather than attending primarily to animated artworks or animation production. This approach illuminates the political stakes involved in moving the concept of animation away from its associations with illusion and mastery and toward associations with realism and distributed agency. This shift presupposes a general Platonism that distrusts fabrication and artifice, and distinguishes such things from truth and knowledge. To avoid over-generalizing, I will focus my comments on Jeff Malpas's definition of animation as 'making move' and on the work of Bruno Latour, whose arguments about modernity, agency, action, and politics often include figures of puppetry – one of the ur-forms of animation. Since Latour's work was foundational to the expanse of media studies, demonstrating its relevance for animation studies gestures toward possible routes of theoretical expansion as animation leaves its minor status behind.[3] My argument will proceed by first considering what it means to refer to animation as a minor aesthetic form, and then, what it might mean to think of animation as a much more expansive, fundamental philosophical condition. In the end, I conclude that it is possible and valuable to maintain both medium-specific definitions and broad philosophical definitions of animation, and that the political vibrancy of animation lies in its problematics and pluralism. Admittedly, this will be a partial account that omits many of the global and diverse facets of animation study, but I hope it is an account that adds a valuable contribution to the Special Issue in its entirety.

Animation as a minor aesthetic form

The expression of minor viewpoints and ideologies has a legacy of impact in the history of art and literature. One well-known theorization of this exists in Deleuze and Guattari's (1986) argument about minor literature and its capacity to challenge literary norms, and conventional modes of knowing and politics. Deleuze and Guattari find minor literature exemplified in the work of Kafka, whose minority status as a German-speaking Jew living in Prague informed his challenge to literary tradition by way of resisting metaphor and representation. Deleuze and Guattari (1986: 16) explain, 'A minor literature doesn't come from a minor language; it is rather that which a minority constructs within a major language.'[4] Animation, then, is hardly an instance of becoming-minor in the fashion of Kafka. Animated propaganda and political cartoons can effectively appeal to dominant discourses and aesthetic traditions. Major animation studios and white male artists have historically received more scholarly and popular attention, while independent women and minority animators have been neglected. It seems unreasonable to grant anything like minor status across a host of animators and animation techniques; and yet, animation's paradoxical marginality and equivocal terminology, its politics, implies something like minor status.

In a narrow sense, animation has been a minor aesthetic form in that it has shared live-action cinema's photographic and filmic basis but frequently has operated according to different diegetic conventions. In terms that approach those of Deleuze and Guattari, if photography and movement are the major elements of cinema, then animation has been a minor construction within those major elements. But animation is not uniformly minor in this sense given that direct animation

and computer animation need not be photographic. The forms of animation that develop minor status typically do so at a conceptual level entangled in the values of modernity. This entanglement is evident when animation is treated as an unconventional alternative, as a devalued or 'bad object', but also when it is discussed as a problem for academic study. Kafka's minor literature offers an alternative logic of sense that appealed to Deleuze and Guattari's interest in critiquing Western philosophy. Likewise, when animation is considered a minor aesthetic form, it can be used to critique the valuation of dominant moving image forms and associated habits of thought.

Driving the notion that animation is a problem for academic study is the neglect of animation by film theory historically focused on photo-indexicality rather than movement (Cholodenko, 1991: 9; Gunning, 2007: 38–39). But, as Suzanne Buchan (2013: 3–7) outlines in her introduction to *Pervasive Animation*, there are a host of factors structuring the study of animation as a 'problem'. These include confusion about how to classify and define animation (Is it a genre, or mode, or set of techniques? Do its variations have common principles? Is cinema a subset of animation or vice versa?). And then there is the dominance of narrative and realist cinemas in addition to a focus on photo-indexicality, all of which obfuscate animation's photographic, indexical, and realist forms. Even articulating the problem this way perpetuates the tenuous, imprecise usage of the term 'animation' to refer to a unified minor form of visual media defined in contrast to live-action film. Further, the field of animation studies has been limited by its early reliance on scholarship by practitioners rather than academics (Buchan, 2013: 2) and animation pedagogy still suffers from a limited canon largely focused on male animators and major studios (p. 6). Finally, in the context of digital cinema, animation is often equated with digital production, which continues to obscure different techniques and materials (p. 7). These ambiguities and limitations, however, while part of animation's relegated position within film and media studies, also make for an important critical approach to those fields and related areas of study. Animation's unwieldy and contradictory presence offers views of dominant practices and aesthetic forms that would not be visible from the perches offered by the dominant forms themselves. The study of animation as a problem prompts questions about aesthetic judgement and historical, cultural value.

Karen Beckman's recent work exemplifies this critical approach. In her article, 'Film theory's animated map' (2015), Beckman considers how animation can disclose marginal texts, regions, and histories within film and media studies more broadly. Commenting on her collection *Animating Film Theory* (2014), she writes: 'the project of considering film theory through the lens of animation repeatedly turned contributors toward issues of (trans)nationality and translation, as well as to overlooked histories of the migration of ideas and practices' (Beckman, 2015b: 475). Beckman attends to an overlooked history herself when investigating the place of animation within the influential *Cahiers du cinema* circle of critics and filmmakers (Beckman, 2014, 2015a). Her historiographical research shows how cartoons, comics, cartography, and other graphic forms influenced Alain Resnais and that, for Resnais, these were not separate from cinema. Beckman suggests that these media appealed to Resnais because they functioned as alternatives to documentary and realist forms that seemed corrupted by the Second World War and institutionalized culture and memory.[5] In this case, Beckman's study of animation as a problem contributes to enhancing historiographical knowledge of Resnais' work and it critiques a narrow definition of cinema. Further, even within an investigation that restores the presence of animation to a key moment in cinema history, animation remains valued as an aesthetic and technical alternative.

A different kind of example of animation's minor status occurs in Jack Halberstam's *The Queer Art of Failure* (2011), which critiques normative, capitalist conventions of success by examining examples of failure in popular culture. For Halberstam, the computer-animated films of the late 1990s and early 2000s provide valuable examples because they tend to be children's films that

depict disorder and revolutionary themes. Halberstam examines how these 'Pixarvolt' films, which include *Toy Story* and *Finding Nemo*, but also Aardman Animations' *Chicken Run*, present alternative modes of being and embodiment and challenge normative social relations and hierarchies (pp. 28–30). This argument maintains that children as not-yet-socialized members of society intrinsically challenge norms and that animated films invested in entertaining children are likely to express similar challenges. In this formulation, the animation enhances this childish, queer critique through its consistent anti-humanistic combinations of animals, humans, machines, its combinations of voice and image, and its blending/stretching/morphing of bodies, backgrounds, and foregrounds (p. 181).

While it is surely the case that animated films targeting family audiences address the typical childhood processes of negotiating norms, it is also the case that the depiction of alternatives, revolutions, and other minor formulations is a major business. It remains difficult not to read the subversive and revolutionary themes of animated family films through the lens of neo-liberal culture in which expressions of individual freedom and revolution are simultaneously monetized, converted to labor by other parties, and utilized to maintain socio-economic stratification. Equally disturbing is the vestigial presence of blackface minstrelsy in American commercial animation. As Nicholas Sammond (2015: xii) documents, this presence implies that the caricatured and subversive rebelliousness, thingness, otherness, and commodification that persist in many animated characters can be attributed to a racialized imaginary.

Since even animated films with revolutionary themes often benefit the corporate status quo and perpetuate stereotypes, theorizing animation as minor should be understood as an additional activity that engages such media in order to facilitate criticism of the dominant aesthetic traditions involved. As in the different approaches of Beckman and Halberstam, there is a basic effort to link forms of neglect and marginalization in order to map and resist dominant discourses. It is here that arguments about aesthetics and medium connect to more practical political concerns. This includes discerning the prevalent valuation of realist aesthetics in visual media and relating it to values in modern culture. Sammond (2015: 31) notes in his study that 'Animation's irreality becomes its plausible deniability.' The under-analyzed role of animated cartoons in perpetuating a racialized imaginary is part of a larger neglect of fantasy media in general. In short, the basic approach I am delineating entails appreciating and analyzing an aesthetic 'bad object' in order to generate criticism of the regime that sets the criteria for judging the bad object as bad.[6] Bad objects have a history of marking social hierarchies and inequities, and their analysis belongs to a postmodern legacy of leveling high and low distinctions in art and culture, whether through feminist, race, or class-based critical approaches.[7] The aesthetic regime that informs the evaluation and judgement of animated media, especially American cartoons, tends to be described as modern or Western and has clear commitments to distinguishing realism from fantasy.

Scholars such as Paul Wells (2002) and Esther Leslie (2004) have made compelling cases tracing animation's roots to modernity and modernism. Concerns with technological development, changes to human experience and sensation, industrialization, rationalization, consumerism, and correlating changes to art and artistic practices have found expression in animation's various techniques and materials. Accounts of animation's modernism tend to focus on the reflexivity and artifice of animated cartoons, abstract forms, and experimentation; the very basic notion being that animation's status in modernity is part of an erroneous division between trick films invested in illusion and realistic films invested in mimesis and narrative continuity. The mistake of referring to this division or to tricks and effects going underground betrays a modern value hierarchy – i.e. that illusion and realistic recording are not valued equally or judged analogously.[8] Considering animation as a minor aesthetic form is unavoidably caught up in a modern value system that positions animation as an extreme form of artifice – i.e. irreality – in contrast to live-action film's more balanced position between the poles of artifice and reality.

The expanse of the term animation, then, has broad ranging philosophical, cultural, and political implications to the extent that it indicates a shifting aesthetic order. In Jacques Rancière's (2006: 3) terms this could amount to a redistribution of the sensible or a reconfiguring of forces regulating perception, sensation, and therein political possibilities. And while this redistribution could bring new aesthetics and new voices into media culture, it is also true that art and entertainment industries are hardly egalitarian or democratic spaces. There will be winners and losers in such a shift. But which elements/parties gain or lose visibility/intelligibility in this process? Animation studies has access to critical methodologies similar to Beckman's as long as animation remains a minor form, but if animation begins to refer to all moving image media, then new terminology will be needed to designate its instantiations that remain minor lest they become further marginalized under the presumption that animation is now a privileged media category.[9] Several of the articles in this Special Issue examine animation elements, practices, and people who remain or become marginalized and overlooked during this shifting media landscape. But before these considerations, I want to continue to investigate how the expanse of the term 'animation' and the changing media landscape could impact the animation concept rooted in modernity.

Animation as 'Making Move'

The expansion of the term 'animation' has elicited cautionary arguments about terminological and historiographical precision, but it has also prompted occasions for more radical reconfigurations of animation as a field of study. Donald Crafton (2011), for instance, argues that animation should not refer to all instances of an 'animation effect' that triggers the biomechanical system that perceives movement. This system can be triggered by a range of media – from watches to optical toys to television, cinema, and computer screens. The common presence of this effect is not dominant enough to tie an assortment of media into a linear historical sequence (p. 107). Crafton is rightfully concerned about maintaining distinctions between media that offer 'animation effects' lest historical and aesthetic accounts become distorted and teleological. On the other hand, something like this happens in Jeff Malpas's (2014: 65) philosophical exploration of animation defined as 'making move', which seeks to overturn animation's affinity with illusion. This definition initiates a departure from animation's modern conceptualization.

For Malpas (2014: 69), animation as 'making move' can refer to a wind rustling leaves or to a moving body that casts a moving shadow. In each case, one moving element begets another moving element. The indexicality of these examples does not interest Malpas. Instead, he focuses on the qualities of differentiation and transformation that constitute processes of making movement: 'animation always involves a transformation, rather than merely a replication of movement or its immediate transference' (pp. 75–76). Following Aristotle, he notes how movement consists of a differentiation between at least two elements and how frequently the movement of one element is transformed into the movement of another (p. 71). In contrast to the prizing of mimesis and representation, Malpas finds the presence of transformation to be fundamental to animated films, primarily cel animation, and to automata and animatronics, in which 'the exact purpose of the mechanism is to transform the one movement into the other' (p. 69).

Malpas's definition serves his own discussion of movement and place in the history of philosophy, but it also expands animation almost indefinitely.[10] Instead of referring to specific kinds of visual moving-image media, animation becomes a fundamental concept for understanding the presence of transformation in our world. In this view, moving-image media are basically a recent iteration of animation suitable for modern industrial and technological contexts. This modifies animation's modernist definition by inserting it into a longer history. By reassessing the concept of animation in this fashion, we can begin to gauge how it has functioned within modern categories

delineated by Western rationalism, political philosophy, and scientific inquiry, and what the stakes are in altering that functionality.

For instance, this interest in transformational movement over mimetic and correlating movement challenges definitions of animation based on illusion. Malpas (2014: 69–70) explicitly argues against defining animation as the 'illusion of life' or the '"illusion" of movement' (p. 76). His definition 'making move', which emphasizes mediation and transformation, is decidedly not illusory. Here, animation does not refer to mistaking one form of movement for another or to denying the presence of one form of movement by fetishizing another, but to the process of one movement becoming another movement. This effort to sever the association of animation with illusion returns us to a classical divide in philosophy and in modernity. Malpas acknowledges that his definition, 'making move', aligns animation, as an instance of construction and fabrication, with the Greek word *technê* (p. 70), which has been opposed to *epistêmê*, or knowledge. His move to sever animation's association with illusion alludes to a Platonic suspicion of human fabrications as lacking a commitment to truth and reality. In other words, animation's association with illusion has separated it from its realist principles. By expanding animation to all instances of making move, Malpas is suggesting that animation is fundamental to understanding the differentiations in time and space that are constitutive of our being in the world.

This shift seems to offer animation the world and a philosophical materialism to which modern animation has hitherto not had much access. Thinking about animation as 'making move' constructs historical continuity across accounts of phenomena in which movement begets movement – from wind-blown leaves to puppets to cel animation. Within this continuity, the quality of transformation and differentiation between the movements involved appears to be the difference that makes a difference – i.e. some movements beget more transformational movements than others.

For instance, Malpas (2014: 69) makes distinctions between heavily mediated forms of animation and less mediated forms – e.g. instances of puppetry in which the puppet's movement closely conforms to that of the puppeteer, as in shadow puppetry. It is worth noting that the more direct forms of animation, which align with notions of indexicality, lack the transformational aspects that Malpas appreciates. This is a significant formulation because it treats animation as privileging mediacy over immediacy. It also counters crude valuations of unmediated access to the world, which have been associated with photography's indexicality and automaticity, and also with modern scientific inquiry more generally. The puppet is an interesting figure here because it raises the question of how much transformation is enough for movement to qualify as animation. A shadow puppet does not seemingly offer enough of a transformation for Malpas even though a shadow is markedly different from the thing making the shadow. The movement of the shadow mirrors too closely its moving origin. The puppet in this case, although easily differentiated from its source, is an over-determined slave rather than a co-actor with enough autonomy to transform the movement of its source. With fewer moving parts and elements to transport and transform movement, some puppets do not demonstrate, or better, dramatize the activity of making move.

Attending to more transformational movement over less transformational movement aligns with an effort to debunk illusion-based definitions of animation. In this case, the astonishment of animation is no longer illusion or a fetishist disavowal (I know it is not real, but …). Instead, the astonishment of animation rests in witnessing real transformations as one kind of movement becomes another kind of movement. This realism (or materialism) does not offer unmediated access to the world, but attends to mediation and construction and how movements are made. The acknowledgment of constructed movement reunites technology, art, and knowledge by removing the old philosophical divide between fabrication and truth. The activity of making is less associated with deception and artifice when making move is essential to the natural world and history. This revision has consequences given that a distrust of fabrication, whether *techne*, *poiesis*, or *rhetoric*,

has persisted in parts of Western thought – in particular, science, philosophy, and politics. Crafton warned about sacrificing historical accuracy in the process of expanding the definition of animation, but Malpas's definition is a reminder that history itself is animated; that the concepts and categories deployed when constructing history – such as illusion and fetishism – transform history as well.

Latour's puppets or animation as distributed agency

So far I have briefly delineated the political potential of studying animation as a minor form capable of illuminating dominant aesthetic logics and valuations. But animation's status as a minor aesthetic form is caught up in its conceptual past in modernity and Western philosophical thought. Malpas's definition evokes this past and animation's association with mediation, transformation, fabrication, and artifice, which devalues it in a modern context invested in scientific inquiry, rationalism, positivism, and indexicality. This is a sweeping formulation, but the basic point is that animated cartoons and avant-garde animation have functioned as modernist engagements with positivism, rationalization, industry, and technology through medium reflexivity, experimentation, visual gags, and slapstick humor, among other aesthetic forms. Rethinking animation as making move facilitates taking a longer view of animation: it is not just a modernist, minor aesthetic, but a realist, philosophical expression of the world. This long view would situate live-action film as one instance of animation that privileges human performance and chunks of continuous motion photography. And, more importantly, the notion of realist expression that this rethinking posits is not limited to unmediated, analogical, or undistorted views of the world. Watching transformations is also a mode of viewing the world.

The example of puppetry is especially apt here because it has a rich allegorical and analogical history and it is an instance of making move that shares many attributes with contemporary animation – from the manipulation of material figures in stop-motion to rigging in computer animation. Among the numerous accounts of puppets in philosophy and literature, there is a tradition of thinking about puppets as being capable of expressing the thingness or alienness that persists within human experience (Cappelletto, 2011; Zamir, 2010).[11] Puppets have also been discussed in modern and contemporary contexts as evidence of a repressed spirituality and belief in the supernatural resurfacing through popular entertainment and art (Nelson, 2001). However, such treatments of puppetry omit the kind of realist, empirical, world-disclosing expression implicated in the making move definition of animation and therein the political expressions associated with it. Reading puppetry as a real presentation of movement that begets movement and transformation challenges thinking of puppetry as a metaphor for the mastery of a creator and the subjugation of creation, and by extension this challenges the concepts of agency, action, and power presupposed in the metaphor.

The work of philosopher and anthropologist Bruno Latour demonstrates with remarkable clarity how a realist reconsideration of puppetry corresponds with a critique of modernity and formulations of power, agency, and action. Latour regularly uses figures of puppets to distinguish between modern and non-modern conceptions of agency and action, and his descriptions of agency, action, and mediation echo Malpas's definition of animation. While Latour does not have animation studies in mind when deploying animated media examples, observing how Latour uses puppet analogies to critique sociology, critical theory, and modern categories exposes the stakes of a realistic approach to animation for political and critical thought. As animation figures and concepts shift away from expressing illusion and mastery and toward expressing distributed agency and mediation, this shift discloses a basic antinomy between certain realist projects and politics while reemphasizing the affinities between politics, aesthetics, and philosophy.

Most of Latour's books feature at least one or two puppet analogies, with the figure of the marionette being the most common example but literary characters are also discussed in terms of being an author's puppets (Latour, 1999: 219–221, 2013: 158). Rarely does Latour reference particular films or productions; instead his examples tend to be generic. In his introduction to actor-network theory, *Reassembling the Social* (2005), there are nearly 40 instances of the term puppet and its cognates. The many pages discussing puppets analogically or allegorically position the puppet and puppeteer as central figures in Latour's explanation of actor-network theory and his critique of modernity.

In this text, Latour argues that actor-network theory provides an important alternative to dominant modes of sociological research. Sociology has typically treated the social as a powerful force consisting of human social ties and practices. This treatment facilitates using sociology as a means of explaining the hidden social forces constructing all sorts of phenomena – from gender and sexuality to racism and religious belief to economic and scientific practices. But, Latour argues, this distorts the associations that constitute the social, which involves non-human actors and what we might think of as non-social attachments. In other words, to study the construction of science one should not simply study its social elements – i.e. the interactions and relationships between scientists, between scientists and their funding agencies, between scientists and their families, etc. Studying the construction of science also requires examining interactions between scientists, technical instruments, laboratories, and all kinds of brute matter and non-human organisms. The goal of actor-network theory is to investigate by following all of the actors involved in a given phenomenon. In this approach, action is defined not as human action but as simply the event of one entity making another entity do something. Action is not about control, dominance, or creation. It is about influence, connection, translation, and transport. Thus, each actor is a network of associations that contribute to the action.

The figure of the puppet is capable of embodying both traditional subject-oriented agency and Latour's networked notion of action and agency. In respect to sociology, Latour (2005: 59–60) writes:

> Sociologists are often accused of treating actors like so many puppets manipulated by social forces. But it appears that puppeteers … possess pretty different ideas about *what* it is that makes their puppets *do* things. Although marionettes offer, it seems, the most extreme case of direct causality—just follow the strings—puppeteers will rarely behave as having total control over their puppets. They will say queer things like 'their marionettes suggest them to do things they will have never thought possible by themselves'. (emphases in original)

Latour uses the figure of the marionette and the puppeteer to make the point that such manipulation is not a one-way street. The puppets actually make the puppeteer do certain things or manipulate them in particular ways. Determination is not present on either side. The strings connecting the puppet and puppeteer also serve Latour's theory because they embody the chain-like connections between actors. It is these connections, associations, and chains of influence that Latour believes sociologists ought to study. And they should not merely follow the strings, they should try to understand how the strings themselves influence action: 'So, when sociologists are accused of treating actors as puppets, it should be taken as a compliment, provided they multiply strings and accept surprises about acting, handling, and manipulating' (Latour, 2005: 60). Latour eventually extends this critique of sociology to critical theory more generally and its efforts to reveal the hidden constructive forces of culture. We can refer to Latour's project, then, as a realist one in that it is concerned with developing more accurate and precise means for describing and accounting for action. This impulse and the definition of action as one entity making another do something echo Malpas's

redefinition of animation as making move. But Latour's realist project has a few more parts to it that show how the figure of the puppet shifts from presenting control and submission to presenting distributed agency.

Across his body of work, Latour explicitly connects this puppet figuration of sociology to 19th- and 20th-century modernity and the expansion of scientific inquiry into social, psychological, and cultural domains. Modern modes of thought tend to establish a series of divisions between nature and culture, science and politics, actor and non-actor, constructed artifact and real phenomena. Latour refers to people who think this way as Moderns, which is a generalization affiliated with the terms Western or developed. But the idea is that Moderns share many habits of thought. For instance, when doing science, Moderns tend to think they are discovering nature, even though they are constructing it through numerous instruments and transcriptions. When studying society and its constructions, Moderns typically omit the non-human interactions contributing to social bonds. Modernization involves this general effort to purify agency and action, and to rely on a series of categories that distort experience and knowledge. This modern methodology omits non-human agency and divides society from nature and includes the proliferation of Western forms of rationality, imperialism, technological development, and scientific inquiry. In this context, puppets become prime metaphorical and allegorical examples to the extent that they present and dramatize the paradoxes and inconsistencies between modern categories.

Comparable to the sociological analogy in which puppetry expresses the divide between actors and non-actors, Latour also uses the figure of the puppet to express the divide between reality and artifice, and between facts and fetishes. This is evident when Latour traces the origin of the term fetish to an 18th-century encounter between the Portuguese and indigenous people living on the west coast of Africa. The Portuguese accused the people there of fetishism because they believed in the divinity of the stone, clay, and wood figures that they had made with their own hands. This exchange epitomizes the introduction of a modern distinction between that which exists independent from human creation and that which originates from human creation. This distinction is part of the modern divide between culture and nature, only here it is combined with the idea that one should not make an image of God. Deploying a logic affiliated with Platonism and Christian iconoclasm, the Portuguese, in Latour's account, are early representatives of modern social science in that they take an anti-fetishist position that devalues the supposedly naïve beliefs of the community being studied. This anti-fetishist position explicitly dismisses any notion that a human-made object can have its own autonomous vitality; this is considered an irrational fetishism, a false belief, and a misunderstanding of artifice and reality. While modern, anti-fetishists accuse idolaters of not knowing that the thing they worship is constructed, Latour's point is that the Moderns are the only ones for whom construction is automatically false.

This desire to escape construction, artificiality, and subjectivity, and to reestablish contact with nature and history through scientific knowledge is an illusory modern predicament. Latour describes this problem as the inability to adequately understand 'factishes' – literally the existence of objects that are independent, autonomous facts and are simultaneously constructed through human means and imagination. To illuminate this problem, Latour (2010: 8) compares fetishism to an encounter with an overhead projector that accords with his puppet examples but is oddly reminiscent of cinema:

> The fetish – at least according to the anti-fetishist – acts, so to speak, like an overhead projector. The image comes from the professor who has placed a transparency on the glass over the blinding light, but what is shown seems to spring from the screen toward the audience, as if neither the professor nor the overhead projector had anything to do with it. The fascinated spectators 'attribute an autonomy to the image' that it does not possess.

The autonomy of the image, the fascination of the spectators, and the 'as if' formulation evoke numerous references from the history of film and animation theory of which Latour may or may not be aware. The passage calls to mind the naivety of early cinema goers that Tom Gunning contests in his work on the cinema of attractions. It also resonates with apparatus theory and ideas about the fetishistic relation between spectator and screen. However, by choosing a defunct classroom technology instead of cinema or puppet theatre, Latour suggests that the modern, anti-fetishist position is not necessarily against moving images as entertainment. The anti-fetishist is more concerned with critiquing those who would confuse an instrument of science with an instrument of illusion and entertainment.

The anti-fetish position assumes that the animated image dupes spectators; that it makes them forget its human origins and human source of power. But the anti-fetishists themselves supposedly know better. These modern, knowing-spectators may enjoy the spectacle, but they are aware of its human origins and artificiality. Thus, the very separation indicated in the statement 'I know very well, but' is a distinctly modern formulation that presupposes the impossibility of a human-made thing possessing autonomous agency. In this formulation, people who do not share this presupposition are distinctly not modern. For them, objects can be divine and human made; this connection can even be the purpose for making them. Latour's point, illuminated by the overhead projector, is that modern categories do not allow for created things to have their own agency; they do not allow for a natural object to be a social object, or for a divine object to be a human-made object. Further, the pleasure of the fetishist disavowal experienced in cinema suggests that Moderns may even enjoy their own contradictory categories. These categories and divides originate from a modern legacy that has combined the pursuit of knowledge with efforts to purify belief – whether belief in a single God or in a final truth.

In sum, Latour's work, including his use of puppet imagery, describes how moderns make double moves. They seek to demystify those objects which have been fetishized and they aim to reveal the actual origins and sources of power operating behind objects. But this kind of critical thinking has created problems for itself by discovering that individuals never act alone. Moderns claim to acknowledge human mastery over human-made artifacts, but then when this does not hold up under their critical, scientific inquiries, they jettison human mastery and conclude that the subject, in puppet-like fashion, is over-determined by various forces – whether social, economic, technological, or other. While moderns may be proud of the self-criticism involved in these moves, they have not resolved their misunderstandings of fetishes and their neglect of factishes. A puppeteer may feel slightly 'outstripped by what she controls', but analogously, there are numerous forces that manipulate and control this very puppeteer. As Latour (2010: 62–63) explains, 'these agents, no matter how powerful you make them, will be surpassed by the puppeteer, just as she is by her puppets.'

Animation, whether made with puppets or drawings or software, presents a remarkable capacity for expressing Latour's argument, especially when it presents itself as the height of artifice and autonomous action. This would be an expression of Latour's factish, or that which is constructed by humans and at the same time acts independent of human control. This is eloquently formulated in Scott Bukatman's (2012) discussion of animated cartoons as 'disobedient machines'. Bukatman remarks that 'cartoon characters don't rebel because they *can* but almost because they *have to*' (p. 136, emphases in original) – they are performance machines designed to disobey. Disobedience in such performances establishes character vitality and autonomy.[12] Animated films and cartoons are able to exaggerate the tension between creator and creation by highlighting artificiality while depicting autonomous movement. Animation's conspicuous artificiality and autonomy are quite paradoxical if 'artificial' means its source of autonomy exists with its creator, not in itself. But this is a categorical distinction created by thought that separates subjects from objects and forces the

world into a sort of grammatical sentence with a subject who acts and objects that are acted upon. What we create always exceeds our intentions, designs, and maintenance and these things work on us in return. In practice we know this. An animator may make his or her tools but the tools make the animator and the animation as well.

While puppets and other animation forms seem at first to express the categories of master and slave, creator and creation, real and artificial, they also express the inaccuracy of these categories. The puppet is never fully controlled by the puppeteer, and further, in many cases of animation, the created character is designed to disobey or at least express disobedience. Animation, then, especially in its modernist variations, has tended toward expressing a critique of categories comparable to Latour's critique of modernity. When critiquing modern categories, it follows that animated media are also alluding to broader philosophical definitions of animation and action – such as those proposed by Malpas and Latour.

Perhaps this is partly the reason for Crafton's (2013) recent effort to rethink the performance of animated cartoons as including audiences and characters along with animators. Crafton echoes the idea that animated cartoons have frequently expressed the contradictions inherent in how agency is experienced and how it is theorized:

> I am mainly interested in the complicated agency that the viewers and the animators devise for the cartoon bodies. The great conundrum here is why do viewers understand these performers to be present and independent, and the performances to be as live as those in non-animated movies? (p. 58)

Crafton's inquiry is consistent with Latour's discussion of puppets, but it is nonetheless striking how Crafton's analysis begins to sound so much like Latour's.

For instance, Crafton (2013: 64–65) acknowledges the analogous descriptions of agency that exist between puppetry and frame-by-frame photographic animation,[13] but his examination of this analogy reveals differing emphases and evaluations. He explains how some animators emphasize their creative control and some puppeteers emphasize the non-human agency of the puppets. The idea here is that the agency dynamics differ per performance because there are different materials, techniques, and ideas involved. These generate distinct relationships and therein an audience actually experiences different forms of action and agency specific to the artistic network. Crafton explores this range of articulations through early 20th-century cartoons and finds typical the rebelliousness that Bukatman highlights, but he also finds tropes of self-creation and self-annihilation among cartoon characters. The implication is that the cartoons participate in an expression of the complexities and ambiguities of agency that operate between animators, audiences, and characters. Crafton (2013: 71) concludes that 'Perhaps it's the case that toons have agency in the world they share with the viewers, the animators have agency in the world they share with the toons, and audiences have agency in both worlds.' Agency in this formulation has become relational and world-specific – that is, the designation of 'agent' depends on what world you are considering – animator, audience, character – but no one world (or actor-network) seems to fully control another. Crafton (2013: 72) offers a clarifying statement on this point:

> Agency in animation, then, is a power grid around which the various players align themselves in relation to each other *in* the animation (other characters and environmental elements) and *of* the animation (to the agencies of the animators, the viewers). Agency isn't an absolute entity possessed by anyone or anything but rather sets of flexible relationships. (emphases in original)

The implication of Crafton's analysis is that it is helpful for him, and ideally his readers, to think about the reality of performance in animated cartoons as a 'power grid', a quintessential actor-network. Thinking about the performance as a network, a set of relationships, dissolves many of

the divides between human and nonhuman agency and between nature and culture. Like Latour's puppets, the non-Disney animated cartoons from the 1930s that Crafton analyzes express modern category mistakes – agency is not restricted to humans and action entails transformation as one entity affects another. Although Crafton resists expanding the definition of animation in the fashion of Malpas, his analysis of performance supports defining animation as an expression of the Latourian ideas of mediation and actor-networks. This implies maintaining both macro and medium-specific definitions of animation. Latour's puppets suggest that the whole world is animated. In other words, there is no movement without transformation, but Moderns constantly search for the origin of movement, the animator, God, Nature, Society, or some other transcendent source, which obscures their own experience of acting within an animated world. Crafton's cartoons entertain these Moderns, but they also expose the contradictions inherent in their thinking.

Conclusion

In this final section, I want to return to the dynamics between the politics of animation and the animation of politics more explicitly by discussing a few of the political implications of animation's association with a realist project like that of Latour's. While animated cartoons share a critical functionality with Latour's puppets, Crafton's analysis also raises a few shortcomings associated with Latour's work, which are not unrelated to Crafton's original concerns about over-extending the definition of animation. Notice that the power grid metaphor illuminates how descriptions of experience utilize concepts that are ready-at-hand. I do not think this one passage is representative of Crafton's book, but it is representative of the unavoidable historical problem of relying on the tools of the present to construct accounts of the past and to interpret past experience. It is not that this leads to falsehoods necessarily, but there is the potential for giving history and experience a homogeneous construction – akin to using power grid metaphors too often. As Latour (2013: 33) acknowledges in his later work, there is a tendency when finding actor-networks everywhere to describe them similarly; investigators are constantly discovering subtle groups of heterogeneous actors entangled together. This problem is compounded when we consider that Latour's flat ontology – that all entities that affect others are treated as equally real – eliminates many hierarchies frequently used in political discourse. Without transcendence or the ability to attribute action to a single source (puppeteer, animator, society, nature, etc.), politics is easily reduced to the effectiveness of network power.

   This last point is a return to a classical debate. After all, this discussion of puppets is an investigation into what it means to act freely and what it means to control others – political and philosophical questions that appear in Plato's allegory of the cave and its figures of puppetry. In fact, Latour has offered close readings of Plato's dialogue *Gorgias*, in which he repeatedly refers to the characters as puppets and the dialogue itself as a kind of puppet theatre carefully controlled by Plato. Of course, part of Latour's project in these readings is to show how the puppet-characters defy and resist Plato's designed argument. But Latour returns to the *Gorgias* dialogue because it stages a debate about Might vs Right in respect to governing society. Plato's idea is that Reason is needed to stave off Might, and by Reason, Plato means natural laws and a universal order that transcends human beings. Latour (1999: 217) finds this point rearticulated by Moderns in terms of science: 'Only a Science that is not made by [humans] will protect a Body Politic that is in constant risk of being made by the mob.' Latour is comparing Plato's Reason to modern Science, both of which are capable of wielding Truth for political purposes. This version of Science (instead of science with a small 's') refers to an ideal transportation of information without deformation, translation, or discussion. Comparable to the puppetry exercised by some sociologists and critical theorists, this Science does not consider the agency of its own strings. It omits political dynamics by silencing the voices of heterogeneous actors (Latour, 1999: 258).

Contrary to Plato's Reason and the Moderns' Science, Latour argues across his work that there are significant democratic and pluralistic possibilities available through acknowledging nonhuman agency and networked action. But this shift toward an improved realism, exemplified by thinking about puppets as figures of distributive agency, on one hand opens up politics, but on the other hand limits the struggle for dominance and inclusion to a single network logic. When power comes from relationships and affiliations alone, there is no recourse for oppressed groups to natural rights or self-evident truths. And for those who mean to rule, maintaining the means of governance gets boiled down to securing and testing fickle relationships and associations.

As Plato knew, realism lacks political efficacy; it is more descriptive than prescriptive. This is in part because reality is plural and accounts that pursue accurate descriptions and presentations of the real, whether in philosophy, art, or criticism, are likely to consist of 'unaligned ethical practices and political projects' and 'a host of heterogeneous forces' (Galloway, 2013: 365). Alexander Galloway emphasizes this point in an article that considers the parallels between recent realist philosophy (Galloway mentions Bruno Latour, Quentin Meillassoux, Graham Harman, and speculative realism, but also discusses Alain Badiou) and the infrastructure of contemporary capitalism. These philosophers' accounts of reality seem to reflect back to us capitalist modes of production heavily reliant on math, automation, and computer programming. The upshot of Galloway's (2013: 365) analysis is that this philosophy neglects critically engaging its own historical context. In respect to Latour, we should acknowledge that accounting for and analyzing action through networks is more manageable in the computer age and this ease is not value neutral. Like Crafton's power grid metaphor, the network concept shapes the reality it seeks to describe and has its own series of associations. As Galloway's argument rightly suggests, strictly realist projects lack the imaginative means to align actors around new ideas and causes. In the case of Latour, discovering the heterogeneous actors and mediators that constitute the world becomes the only unifying constant in every inquiry, whether about the construction of science or the construction of society.

This brief discussion of Latour's shortcomings suggests an affinity between realist efforts and might-as-right politics, but it also anticipates a concluding point about the politics of animation and the animation of politics: namely, that the nurturing ground for politics is not to be found on the shores of verifiable knowledge, but upon the contentious terrain of uncertainty and aesthetic judgment. Both Latour and Graham Harman, whom Galloway also mentions, have expressed such positions after making more realist claims earlier in their careers.[14] And in respect to the foregoing discussion of animation via Malpas, Crafton, and Latour, the expansion of animation as a concept along philosophical and realist lines is valuable for exposing the limitations of modern habits of thought, but a realist definition alone is likely to have a political chilling effect. *That is, realist accounts of animation, while valuable and true, cannot convey on their own the multiplicity of ideas and worlds that animated media suggest.*

As I alluded to before, the homogeneous presence of networked heterogeneous actors is one of the self-critiques that Latour deploys to introduce his recent and most ambitious philosophical project, *An Inquiry into the Modes of Existence* (*AIME*, 2013).[15] In this project, Latour delineates different modes according to their own specific truth conditions and prepositions – networks [net] is merely one of the 15 modes, which include law, religion, politics, science, and technology to name a few. By the time of *AIME*'s publication, Latour's approach to politics is no longer inclined towards a might-is-right philosophy, but has become explicitly 'object-oriented' (*AIME*, ch.12). By 'object-oriented', Latour is referring to the idea that politics does not exist independent of political issues (objects). Influenced by the work of Walter Lippmann, John Dewey, and Noortje Marres, Latour understands political activity as forming around issues that affect and therein form a given public. This object-oriented definition emphasizes the role of ignorance: in addition to the absence

of transcendental authorities and truths, people lack expertise about all the issues going on in their worlds. Graham Harman (2014a: 177) explains that for Latour, politics

> results from the hybrid crossing of humans with things … Since even experts cannot fully sound the depths of those things, let alone those non-experts who are affected or concerned by a given issue, ignorance lies at the basis of all human action.

Harman is intentionally articulating Latour's position in terms that align with his own philosophy.[16] But he is also emphasizing their common appreciation of ignorance, which follows a Socratic tradition that loves and pursues wisdom, but never possesses it.

Both the pluralist notion of multiple ontological modes and the crucial role of uncertainty in politics have strong affinities with the foregoing discussion of animation. As if responding to Galloway's analysis, Harman and Latour's turn away from realist efforts acknowledges that such mathematical accounts of reality are only one reality out of many. Politics, for instance, is one mode for Latour that is not oriented around realism; it is oriented around issues and the publics that gather around them. A fervent commitment to the real can amount to abdicating the political future, which is a problem for theorists concerned about the future of earth. This sounds contradictory given how important it is to acknowledge good science when debating what to do about climate change, but contemplating the virtual and the possible are equally important. As is reckoning with the other modes of human existence that inform how people address global crises.

In line with Latour's definition of politics, animation as a problematic field and set of objects has prompted people to gather around it. The foregoing argument has considered maintaining some aspects of this vital problematic by including both broad, philosophical definitions of animation and narrow, medium-specific definitions. These definitions are associated – as in the case of animated cartoons offering critiques comparable to Latour's – but they need not exclude each other even as animation undergoes definitional and conceptual remapping. Further, animation's legacy of being a minor form can assist in this call for pluralist thinking as attested to by Halberstam's argument that the alternative worlds built by animated films are conducive to alternative political formations.[17] The tradition of building worlds and expressing a sense of otherworldliness that remains affiliated with animation prompts explicit contemplations of pluralism. This idea also correlates with Crafton's (2013: 72) analysis of performance, which maps the different agential worlds between animation, animator, and audience.

It is true that the foregoing analysis and argument has dealt with only a few of animation's associations and those have been primarily conceptual and general. Distinct animated worlds, different modes of analysis, and unique geo-political and production contexts have hardly been discussed. Fortunately, the other articles in this Special Issue help round out, complicate, and challenge the ideas put forth here. These range from arguments about traditional theories of animation to discussions of political expressions within specific animated films to analyses of animation labor in contexts of neoliberalization, globalization, and gender and sexual inequality. The curation of these articles has involved a conscious effort to express the breadth of animation study and to gesture toward a program for future study. While the short history of animation's minor status may have ended, it remains valuable to cultivate a politics of animation – a field of study and practice that focuses on problems, alternatives, and marginal objects – in an effort to maintain an animation of politics.

Acknowledgements

Funding

Notes

1. A few recent book collections detailing the expansion of animation include Suzanne Buchan's *Pervasive Animation* (2013) and Karen Beckman's *Animating Film Theory* (2014). Recent academic conferences include Life Remade: The Politics and Aesthetics of Animation, Simulation and Rendering at Birkbeck University of London, June 2015 and Fantasy/Animation: A Conference on Media, Medium and Genre at King's College London, September 2015. The Society for Animation Studies also hosts an annual academic conference. Finally, this 'Animation and Politics' Special Issue developed out of a couple of panels I organized for the Society for Cinema and Media Studies Conference in Montreal, 2015.

2. For example, see Manovich (2001), Cholodenko (1991), LaMarre (2009), Cubitt (2004), and Gunning (2007).

3. Latour has begun using the term animation more frequently as a synonym for agency (see Latour, 2014). A more animated view of the world would be one that acknowledges agency among actor-networks.

4. Kafka's fiction uses the major language of German but to express alternative logics of sense or illogical sense experience, e.g. when the character Gregor Samsa becomes a beetle this is not metaphor, it is metamorphosis. Instead of using literary expression to refer to something outside the literature, Kafka's work resists this conventional mode of reading referentially. Despite Kafka's singular notoriety, Deleuze and Guattari explain that for minor literature all work has collective value because there are no literary masters in a minor literature. The political context contaminates every statement the authors make, even if they are not in agreement. In this way, the work calls others to form a community (Deleuze and Guattari, 1986: 17).

5. When discussing the Resnais and Chris Marker collaboration *Toute la mémoire du monde* (All the Memory in the World, 1965), Beckman (2015: 15) writes:

   It is as if Resnais, through a network of authorial references and images, were posing the question of how to create cinematic truth in 1956 in the wake of the fascist use of documentary film. Along with collaborative authorship, ephemeral and simple graphic images—the kind that would never be catalogued in this library—seem to participate in his answer to this implied question, not least because the film constantly and explicitly bemoans the imprisonment and domestication of cultural artifacts. There is something special about those objects that manage to escape and that are suspended between cultural permanence and cinematic ephemerality.

   The description of graphic images as ephemeral refers to Dudley Andrew's Bazinian claim that films of paintings differ from animation because paintings gain permanence and solidity from being kept by museums. Beckman is critical of this cultural officiating and remarks that *Toute la mémoire du monde*, 'might be read as a fantasy about a different type of cultural memory or storehouse, one made up of culturally unsanctioned objects that perhaps offer a counterhistory' (p. 15). Beckman champions the values of filmmakers like Resnais and Marker, who persistently declare an openness to cinema's becoming and participate in the creation of cinemas that use new technologies, dispose of or retool old ones, and are permeated and transformed by neighboring arts, including animation and the comic strip. (pp. 24–25).

6. Rosalind Galt's *Pretty: Film* and *the Decorative Image* (2013: 12), while not about animation, demonstrates this critical maneuver quite thoroughly by analyzing film examples of pretty aesthetics which are at once 'too decorative, too sensorially pleasurable to be high art, and yet too composed and "arty" to be efficient entertainment'. The category of pretty enables Galt to critique a film studies aesthetic regime that privileges anti-aesthetics (aesthetic austerity), neorealism and cinéma vérité, and marginalizes non-European and non-American film styles that are deemed too decorative.

7. Andreas Huyssen (1986) explores this legacy in his work, and in his essay 'Mass culture as woman,' he writes:

    One of the few widely agreed upon features of postmodernism is its attempt to negotiate forms of high art with certain forms and genres of mass culture and the culture of everyday life. I suspect that it is probably no coincidence that such merger attempts occurred more or less simultaneously with the emergence of feminism and women as major forces in the arts, and with the concomitant reevaluation of formerly devalued forms and genres of cultural expression (e.g., the decorative arts, autobiographic texts, letters, etc.). (p. 59)

8. It is worth recalling here Stanley Cavell's (1979) appreciation of film for offering an aestheticized version of a modern epistemological problem – i.e. skepticism or doubts about the human capacity to know others and the world. Film rehearses this problem by simultaneously presenting the world and others and screening us from them. Modern skepticism involves a fraught drive to escape subjectivity and illusion by finding security in scientific objectivity and truth.

9. Cinema Studies itself has had a significant role in remapping cultural, intellectual, and aesthetic divides. In Patrice Petro's recent interview with Mary Ann Doane (2015), both scholars recall the political engagements that were central to the field of film studies when it was a younger field open to different critical and theoretical perspectives and plenty of engaging debates. See the Society for Cinema and Media Studies' 'Fieldnotes', available at: http://www.cmstudies.org/?page=fieldnotes (accessed 3 December 2015).

10. Referring to his approach as 'naïve', Malpas (2014: 66) admits that his concerns are primarily philosophical and that he neglects the sophistication of scholarship primarily concerned with animation as a field of media and artistic study. His interest in animation is motivated by the goal of qualifying process philosophy's focus on temporality by re-orienting philosophy around the idea of place as constituted by movement, which includes differentiation and transformation (p. 71).

11. Puppets, after all, present vitality and activity to an audience, but they also present a dead, mechanical, or masked interiority – e.g. dolls, marionettes, hand puppets. This can resonate with the duality of human experience in which a person finds his or her body, emotions, and thoughts at once under his or her control and beyond his or her control; these elements are at once the person and within the person. This mode of expression is quite conducive to phenomenological analysis and its bifurcation of agency resembles puppetry's common master–slave/creator–creation denotations.

12. This also resonates with Christian theology that celebrates humanity's original sin and disobedience because it indicates free will and serves as the precondition for grace and redemption. Of course, both Latour and many forms of animation suggest that it is the autonomy of nonhumans that we need to redeem.

13. Crafton (2013: 63) writes, 'There is an analogy between the mechanisms of agency in the relationships among puppeteers, puppets, and audiences and those of animators, toons, and their audiences.'

14. To hear Harman's discussion of art and philosophy both operating in the space of ignorance and unknowability, see Harman's YouTube lecture 'Graham Harman: Objects and the Arts', ICA: https://www.youtube.com/watch?v=QJ0GR9bf00g, 27 March 2014.

15. *AIME* features a central ethnographer character, and early on in the study, Latour (2013) writes:

    And yet, to her great confusion, as she studies segments from Law, Science, The Economy, or Religion she begins to feel that she is saying almost *the same thing* about all of them: namely, that they are 'composed in a heterogeneous fashion of unexpected elements revealed by the investigation'.To be sure, she is indeed moving, like her informants, from one surprise to another, but, somewhat to her surprise, this stops being surprising, in a way, as each element becomes surprising *in the same way*. (emphasis in original, *AIME* 33)

16. Harman (2014b) has discussed how Latour's relational ontology (that which exists is that which affects other things) fails to account for the reserved surplus of objects themselves that are not present in relationships.

17. This idea approaches Buchan's (2006: vii) use of the term 'animated worlds' to refer to 'cinematic experience[s] that are accessible to the spectator only through the techniques available in animation filmmaking'.

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Traces of the World: Cel Animation and Photography

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Abstract

The animated cartoon has traditionally been excluded from photographic theories of cinema on the grounds that the animation camera is only incidental to the cartoon's production, an assumption this article challenges. Taking as its basic premise that all works of celluloid animation were photographic in origin, this article demonstrates the ways in which the physical reality of our world, and particularly the world of the animation studio, leaves its mark on the cartoon image. Through the frame-by-frame analysis of cartoons by Warner Bros and other major American studios of the mid-20th century, the author catalogues the various visual imperfections that testify to cel animation's photographic origins. These include improperly placed cels, reflections of the camera apparatus, dust and dirt particles, and even the fingerprints left by anonymous labourers. Although these mistakes may only appear on the screen for a fraction of a second, each has been preserved for posterity as a still photograph. In effect, an animated cartoon is a photographic record of its own production. A model for this method is the work of the artist Andrew Norman Wilson, whose *ScanOps* (2012) consists of a series of photographs culled from Google Books. Ultimately, this method of analysis serves as an inquiry into both the politics and the aesthetics of the labour process.

Keywords

animated cartoons, archival documents, cel animation, film theory, Hollywood cartoons, labour, mistakes, photographic evidence, photography, production process

The art of photography has been persistently haunted by the image of human labour.

Allan Sekula (2014[1996]: 17)

I like to think of each image – whether it contains accidents or not – as a view of the world. They reveal traces of the humans and technology that produced them.

Andrew Norman Wilson (Ptak, 2013)

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For most of the 20th century, to animate was to photograph, and to photograph *a lot*. A theatrical split-reel short produced by an animation studio might comprise anywhere from 5,000 to 10,000 separate frames. Each film frame, in turn, presents us with a stack of multiple cels that cohered only in the brief period it took for the camera operator to assemble and photograph them. In addition, the various elements of the photograph were, more often than not, ephemera. While some cels have had a storied afterlife as collectors' items and museum attractions, the majority survive only on film. Their painted adornments were frequently washed off once they had been photographed, so that the cels could be reused in subsequent productions. After four or five cycles, the cels were then incinerated. Animated cartoons thus effectively serve as photographic records of ephemeral documents. While the photographs of which they are composed happen to be ordered in such a way that, if viewed in succession at a precise speed, they produce the illusion of movement, they can also be re-sorted, cross-referenced, or simply viewed one frame at a time.

Like most photographic archives, from microfilm newspapers to crime galleries to geographical surveys to digitized books, works of cel animation were produced under tightly regulated conditions. Following exposure sheets, camera technicians in animation studios adhered to the sort of 'strictly determined routine of distance, camera angle, lighting, and type of lens and apparatus' (Gunning, 2008: 30) familiar to police photographers: which cels to add, which to remove, how to position the camera relative to the background, and so on. Inflecting all of these processes is the rhetoric of documentation, or what John Tagg (1993: 11) defines as the rhetoric 'of precision, measurement, calculation and proof, separating out its objects of knowledge, shunning emotional appeal and dramatization, and hanging its status on technical rules and protocols whose institutionalization [has] to be negotiated'. As has been routinely acknowledged, the task of the camera operator was 'tedious', 'mechanical', 'monotonous', 'enervating', 'exacting', and 'exhausting' (Canemaker, 1977: 275; Fallberg, 1959: 198; Mitchell, 1931: 68). The operator of the animation camera was a 'proletarian of creation', Bernard Edelman's term for the 19th-century photographer who, responsible for 'merely deploy[ing] an apparatus', had no authorial or legal claim to the images he produced (see Sekula, 2014[1996]: 17; Tagg, 1993: 109).

The mechanization of the labour process by which animation's constitutive frames were photographed leads to a curious and perhaps paradoxical phenomenon: the complete disavowal of cel animation as *photographic cinema*. As Shamus Culhane, who worked with many of the major studios, explained in 1955 to the trade journal *Sponsor*, 'the camera plays a relatively small role' in animation. The task of the camera operator was enormous and often daunting, but the creative force he exerts on the final film (even though it would not be a film without his intervention) is negligible: 'Unlike the camera in live-action which actually creates, the animation camera merely records what has already been created' (Where does the money go?, 1955). Culhane's remarks anticipate a commonplace assumption in film theory: the ontological divide between animation and photography. Dudley Andrew (2010: 2), for instance, holds the photographic process to be only incidental to animation, a mere stop-gap between the flipbooks and phenakistoscopes of yesteryear and the computer-generated imagery of today: 'Cel animation has always amounted to a camera-less cinema' Sean Cubitt (2004: 92), meanwhile, treats animation as a conceptual paradigm distinct from photography: 'Photographic frames reproduce, but animated frames produce'; this is an outgrowth of Lev Manovich's (2000: 177) observation that animation's 'visual language is more aligned to the graphic than to the photographic'. And Stanley Cavell (1979: 168) puts it bluntly: 'Cartoons are not movies'. Cavell allows that animated cartoons create a world, but what is most important for him is that their world is not *the* world. In this respect, an animated cartoon is like a painting, in that it '*is* a world', not a photograph, which is, Cavell emphasizes, '*of* the world' (p. 24).[1] The frame of a painting is centripetal, pulling us inward, toward a world found only within its borders; the photograph, by contrast, is centrifugal, pushing us outward, beyond its bounds: a

window. Thus live-action cinema offers us one thing, a view of *the* world, and cel animation offers us something different, *a* world governed by a physics all its own, a plasmatic and limitless world where bodies never bruise and anvils are always falling from the sky.

But photography, of course, is many things. As Hollis Frampton (2009[1965]) has outlined, it is an industry, a craft, a technology, a tool, a science, a trade, a racket, a hobby, a national pastime, and only rarely an art; it is an instrument of state control and sells lipstick and preserves moments we would rather forget. The automated, large-scale photographic practice I have outlined above places animation in the same category as archival and disciplinary photography. We might, then, submit animated cartoons to the discursive order of the 'filing cabinet', which, according to Rosalind Krauss (1982: 315), 'holds out the possibility of storing and cross-referencing bits of information and of collating them through the particular grid of a system of knowledge'. But in calling attention to the photographic processes undergirding cel animation, I wish also to place animated cartoons within the discourses that have long dominated film theory.[2] Animated cartoons, I contend, offer us a view of *the* world.

When we watch an animated cartoon, we think of what we see as the unspooling of thousands of individual paintings. Indeed, it is a testament to the power of photography that we *forget* that we are watching the unspooling of thousands of individual *photographs* that had to be taken one at a time. This article serves to remind us of that labour. In a how-to guide on animation, even Culhane (1988: 254) would concede that camerawork was incredibly taxing. 'In many ways, the one behind the camera has to be the most patient person in the studio', he writes. 'Animators scribble illegible numbers in the exposure sheets; checkers stack cels out of sequence; at one in the morning, a cel is found to be missing—the list of possible mishaps is endless'. Dust accrues on the cels; a stray thumbprint leaves a lasting impression; paint is applied inconsistently from one cel to the next. Some of these mishaps, when they escape the camera operator's notice and are recorded for posterity on film, betray the photographic origins of cel animation: they are made visible after the photographic apparatus brings them literally to light. Others only become apparent in the succession of frames, in the difference between images.

To see them, I have examined hundreds of American animated cartoons frame by frame – or, rather, photograph by photograph. This mode of looking is, admittedly, perverse. What is an animated cartoon if it is not *animated*? From Sergei Eisenstein (1988[1940–1941]) to Tom Gunning (2007), Chuck Jones (1989) to Vivian Sobchack (2009), filmmakers and scholars have long argued that the very appeal of animation is its *movement*. Yet arresting this movement, viewing animated cartoons not in motion but as a series of stills, does not, I think, contradict the claims made by these scholars. Indeed, it implicitly acknowledges the power of movement to occlude all other aspects of the photographic image. Stopping the film allows us to return it to how it was made – in fragments, one motionless image after another – and for an attention to oft-neglected details. These can include elements within the frame, like the interplay between foreground and background elements, and changes between the frames, like character position and camera placement. Confronted by the thousands of constitutive frames of a motion picture and seeking to recover the moment of photography (the 'click') to which each frame corresponds, one must play at being the Parisian police detective Alphonse Bertillon;[3] one must analyze the elements of the reproduced image as if they were 'footprints, stars, feces (animal or human), colds, corneas, pulses, snow-covered fields or dropped cigarette ash' (Ginzburg, 1980: 24). Such a precision of vision recognizes how the tiniest of details – a brushstroke, a shadow, an errant speck of dust – is freighted with historical and, ultimately, political weight.

This is an impossible task, a foolhardy task. Bertillon confessed that not even he could be expected to scour the collection of criminal portraits his police force had amassed. To sift through hundreds of thousands of photographs was an undertaking 'so fatiguing to the eye' that 'errors and

oversights' were inevitable (Tagg, 2012: 29). One cannot spot every mistake, nor can one be certain of the causes of those that are identified. The clues one seeks are often buried or misplaced due to the scratching, shrinking, and chemical deterioration of film stock. Films transferred to DVD and Blu-ray are typically scrubbed of many of the most revealing 'imperfections', but they also are accessible for review and examination in ways that archival prints are not. Digital 'restorations' both enable one to see *more* of the image and yet deepen the sense that the closer one peers, the harder it is to discern just what separates the photographic from the graphic: Is that a rippling pond, or the warping of a film print, or the swim of pixels? In addition, special-effects techniques like multiple exposures, optical printing, wash-off relief emulsions, or rotoscoping may turn the photograph into an illegible palimpsest. To deal with the image alone is to confront continual epistemological instability, only some of which can be satisfied by secondary sources. No matter how long one dwells on the material properties of the image – from the grain of the film stock to the fiber of the background watercolor paper – certain practical questions remain, which then open onto deeper epistemological and ontological debates.

But instead of resolving the tug-of-war between the photograph's own materiality and the material object it represents, between the world of the image and the world that has made the image come into being, this article takes that ontological struggle and its attendant epistemological uncertainty to constitute *a form of aesthetic experience*. Thinking of an animated cartoon as a visual catalogue yields a renewed understanding of and investment in its aesthetic power. At the same time, information can be gleaned from the frame-by-frame study of the animated cartoon, deictic information that points both to the reproduced document's composite elements and to what is absent from the frame. A single still from an animated cartoon, read as a photographic document, enlarges, flattens, and reframes its subjects. What was visible to the naked eye, such as the transparent sheet of celluloid, disappears beneath the camera's gaze, while the photograph simultaneously reveals what even the most diligent technician had missed. In what follows, I analyze the visual aesthetics of animated cartoons as if the constitutive frames were each a photograph in one of the family albums famously described by André Bazin (1967[1945]: 14):

> No matter how fuzzy, distorted, or discoloured, no matter how lacking in documentary value the image may be, it shares, by virtue of the very process of its becoming, the being of the model of which it is the reproduction; it *is* the model. (emphasis in original)

Yet I also take instances of fuzziness, distortion, and discolouration not as barriers through which we pass in order to satisfy our need for the material object but as part and parcel of photography's own materiality. The individual film frame becomes, under such scrutiny, a document of its own production.

Cataloguing mistakes

A six-second sequence in Friz Freleng's *Hare Force* (1944), an otherwise inauspicious installment in the *Merrie Melodies* series, is rife with all sorts of marginal and often unintentional details – mishaps, accidents, mistakes, errors, clues. A dog, engaged in a heated rivalry with Bugs Bunny, visualizes the ways Bugs could meet his demise: by stabbing, by cannon blast, by being hacked to bits. The cel set-up is relatively simple. The dog is painted to simulate a medium close-up. Although his torso barely moves throughout the sequence, subtle variations in its outer contours and the folds of his shoulder from frame to frame indicate that his head and upper body were painted on a single cel – not, as is often the case, on separate cels, which would have allowed animators, inkers, and painters to redraw and repaint only his face. While time-consuming, painting the entirety of his

body on a single cel did afford an advantage. Acetate cels are not completely transparent; when additional cels are overlaid, the colour of the cels below darken. Even a stack of two cels would have required the painters to 'compensate' for this minute difference in tones by mixing separate tones for each cel – a time-consuming and sometimes impossible task in its own right.

Meanwhile, the dog's vengeful reveries appear above his head in the form of thought bubbles, which are rendered in white ink on cels that overlay the one on which the dog is painted. Each one is held on screen for approximately two seconds, enough time for the audience to register the sheer cruelty of the dog's fantasies and then marvel at the shifts in the dog's facial expressions – the quirk of an eyebrow as his ideas begin to tickle his fancy, the lips pulling back to reveal a malicious grin. Against the black background, the white sketches read like chalkboard drawings; there is a hastiness and urgency to the line rare in cartoons of this period.

But it is the black background of the scene that ultimately provides the greatest source of fascination. Large dark areas in the image field were notoriously difficult for camera operators to light properly. As Disney layout designer Ken O'Connor once noted, the lights 'tended to grey out the black', and, in addition, 'the black background paper was excellent for bringing out any dust specks' (Langer, 1993: 42), a point made clear in a later sequence in *Hare Force*: Bugs, isolated in medium shot, is orbited by a tiny, ever-shifting galaxy of white spots. Furthermore, intervening between the black background and the camera were several layers of transparent cels, onto which sweat and oil could so easily rub, and a glass platen, which was used to secure the cels and background in place but also made the task of lighting the image consistently all the more difficult. And, sure enough, in the photographs of the dog, a faint orange glow is visible on the left side of the frame. Almost the same hue as the dog's fur, it has been produced not with a paintbrush but by the lights of the animation camera. Halfway through the sequence, when the dog imagines Bugs facing down cannon fire, four or five blue streaks also appear just above the orange glow. These streaks are arranged like the fingers and thumb of a hand – and, indeed, they are most likely the result of the cel having been handled by one of the anonymous workers on the animation assembly line (perhaps an inker, perhaps the camera operator). A black background, rather than evacuating depth from the image, in fact gestures to the world outside (above and before) it. This single sequence illuminates both the dog's brutal fantasy world and the material facts of its production.

Hare Force is but one installment in the *Merrie Melodies* and *Looney Tunes* series, which number over a thousand and are joined by the thousands of other works of cel animation produced by major American studios. The accidents *Hare Force* discloses are by no means exceptional – nor is the fact that it discloses these accidents at all. Each and every animated cartoon is a photographic archive, and each and every one of its frames can be understood as an individual photograph that preserves a moment in time. A reel of film, in this sense, is a record of its own making. Its constitutive frames double as a visual catalogue of mistakes.

Of course, blink and you will miss these errors. You must stop the film. Look. Stare. Treat the still frame as if it were a mug shot. Follow Oliver Wendell Holmes's (1859) analysis of the 'lesser details' and 'incidental truths' of stereograph cards. 'The more evidently accidental their introduction, the more trivial they are in themselves, the more they take hold of the imagination', he writes. Whether examining two successive frames of an animated cartoon as if they were 'twin pictures' in a stereograph or watching the film at 24 frames per second, one can surrender to the glimpses, the hints, of the lives and worlds that these images offer us. To Holmes, an out-of-focus figure in the corner of a photograph writes 'a hundred biographies in our imagination'; so, too, can one hypothesize – fantasize – about what human fallibilities gave way to the imperfections enumerated above. What 'longings, passions, experiences, possibilities' yielded what we see? Boredom? Exhaustion? Frustration?

Some result from mistakes made earlier in the production process. Try as they might, painters could not always control the consistency with which they applied colours to a cel. As a consequence, the dresses worn by Mama Bear in Tex Avery's *The Bear's Tale* (1940) and Witch Hazel in Chuck Jones's *Broom-Stick Bunny* (1956) churn and shudder within the contours carefully delineated by the Ink Department; their streaks of brown and blue appear to move of their own accord, performing serpentine dances of lighter and darker swirls. Frequently, cels were painted the wrong colour or not at all. As Snow White tends to the well in Walt Disney's *Snow White and the Seven Dwarfs* (1937), a patch on her skirt moves around and changes from light blue to purple; in Bob Clampett's *Falling Hare* (1943), the grey and white of first Bugs Bunny's tail and then his leg switch places; in Freleng's *She Was an Acrobat's Daughter* (1937), the polka dots on a woman's dress come and go. It was not the camera operator's job to catch such mistakes – after all, cartoon bodies routinely mutate, so how could he be expected to know what, indeed, was unintended? But the camera, regardless, captures them unblinkingly. When a patch on Snow White's dress changes colour or position from frame to frame, we perceive these mistakes as movement – as, indeed, animation. That tiny rectangle is suddenly endowed with a life of its own, a life apart from either Snow White or *Snow White*. It is like fire or smoke or water, like a billowing curtain or trembling leaves.

Other common mistakes, meanwhile, might very well be the fault of a bored or harried or careless camera operator not following directions, or they might result from a camera operator following incorrect directions to the letter. Cels, if stacked in the wrong order, sometimes reveal imperfect or impossible bodies. In Dave Fleischer's *Popeye Presents Eugene the Jeep* (1940), Popeye spends most of a scene behind a table before exiting screen right. In one frame, however, one sees a portion of his body that was supposed to be covered by the tablecloth: his leg is inked but unpainted, and someone has crossed it out (most likely as a signal to the Paint Department to forego that half of his body). As a scene unfolds, a cel might be forgotten, if it made it to the Camera Department at all, and a character will disappear for a split-second. In Avery's *Gold Diggers of '49* (1935), a cowboy hippopotamus jumps onto a horse that, for one frame, isn't there to catch him, while a gurgling baby loses a leg in Freleng's *Foney Fables* (1941). In a sequence in Jones's *Hair-Raising Hare* (1946), Bugs Bunny attempts to keep the fearsome monster Gossamer from barreling through a door. He arches every part of his body—his feet, his back, and even his ears—to hold closed the bending door. 'Is there a doctor in the house?' he calls out to the audience in desperation, his head turning toward the fourth wall (Figure 1a). A split-second before a silhouetted figure leaps up to answer his cry, Bugs's head disappears for a single frame. The rest of his body remains, retaining its contorted pose (Figure 1b). Just like that, we realize he has been painted in sections, his head on one cel and his body on another, and we see both the total coherence of Bugs's graphic design (insofar as every part of him is reacting in some way to Gossamer's physical threat) and the completely fragmented labour process that necessitated dividing him across several cels.

Very rarely, a cel might be accidentally placed before the lens with its verso side facing up. Characters' outlines were inked on the front of the cel and then sent to the Paint Department, where they were opaqued on the back in order to preserve the integrity of the inked contour. A view of the verso side reveals the painter's brushstrokes, particularly where she did or did not trespass the inker's borders. In Frank Tashlin's *Porky Pig's Feat* (1943), for example, we are not meant to see Daffy Duck's gloppy underside, in which his bill lacks details like lips and nostrils and his hands distinct fingers. Porky Pig, standing at the left of the frame, is painted on a separate cel, the correct side of which has been photographed: his face has carefully delineated cheeks, eyebrows, and wrinkles (Figure 2a). By the next frame, the camera operator has righted Daffy's cel; Porky, meanwhile, remains exactly as he was in the previous cel set-up, slightly aghast at his friend's grandstanding (Figure 2b). For an all-too-brief moment, though, we have been made privy to just what was in front of us all along, if hidden from view.

These flickering micromovements, while rooted in the graphic character of animation, first become visible after one admits that the animated cartoon could have a place in a photographic theory of cinema. That is, in recognizing that cel animation was *never* camera-less, even if it (arguably) aspired to be so, one begins to see how its individual frames offer us a unique view of physical reality. Furthermore, many of the typical mistakes were themselves invisible to the naked eye. One would have to hold each cel up to a light to see that the paint had been inconsistently applied. The taking of the photograph is a moment of exposure, of illumination. The stack of cels before the camera is a palimpsest of opacity and transparency. Light is diffused, reflected, absorbed. According to Donald Crafton (2013: 165), there could be up to a '25 percent difference in illumination between the top and bottom cels in a four-layer stack'. And even if this difference in illumination was taken into account, cels – and the camera apparatus itself – might still betray their material properties before the camera. The reflection of the camera lens is visible in several *Merrie Melodies* and *Looney Tunes* shorts of the 1930s – it hovers over the bodies of elephants in both *I Love a Parade* (Rudolf Ising, 1932) and *Buddy's Circus* (Jack King, 1934) and, according to Crafton (1993b: 205), in the panning shots of *Little Beau Porky* (Frank Tashlin, 1936).

It is the photographic apparatus that not only records and reveals many of these particular mistakes but also, in fact, creates them. Before taking the photograph, the camera operator would secure the background and cels under the glass platen. If too little pressure was applied to the platen, however, the opaque, painted areas of a cel might cast a sliver of a shadow against the background. As a result, the character or object on the cel seems to stand out in relief. Too *much* pressure, on the other hand, could result in a series of concentric bands called Newton's rings, an optical interference pattern that also appears on the surface of oil slicks and soap bubbles.

But here animation's status as photography begins to pose an epistemological problem: *What are we seeing?* The material properties of the photographed and the material properties of the photograph cannot always be disentangled. For instance, it is often impossible to tell whether Newton's rings were produced in front of the camera, by pressure from the platen, or still later in the production process, by a contact printer. In other words, imperfections like Newton's rings signify another sort of close contact – the intimate connection between, or even collapsing together of, the filmed and the film. Where does one begin and the other end? Was that celluloid fiber wriggling at the side of the frame stuck in the gate of the camera in the animation studio or in the gate of the projector used for optical printing? (In Tex Avery's *Magical Maestro*, 1952, much to the audience's surprise, a character 'plucks' just such a hair from the bottom of the screen – a graphic image can look an awful lot like a photographic one.) Or consider, once more, the reflections from the overhead camera lights that frequently lick at the edges of the frame. These are especially prevalent in those cartoons that use nitrate instead of acetate cels. On occasion, the reflections look like (or are even indistinguishable from) the warping and bubbling of nitrate film stock and serve as a reminder that the photographed object and the film itself are, at base, one and the same: celluloid and celluloid.

Dust specks, too, confound our ability to tell the photographed and the photograph apart. Well aware that what might go overlooked in production would be magnified thousands of times in the projected film, studios took multiple measures to keep dust and dirt from making their way into the final image. These measures, however, were never quite enough. Barbara Baldwin, who worked as an airbrusher at Disney, recalled in a 1995 oral history that she and the other women once bought the few male employees in the Inking and Painting Departments hairnets to prevent dandruff from getting on the cels. This might have been a practical joke intended to further emasculate men performing what was already considered women's work, but it also reflected a real anxiety about the many ways in which a cel might be sullied. According to an article in *American Cinematographer*, the Camera Department at Disney's studio at Burbank housed a special cel-cleaning room, where cels were treated to discharge static electricity (Lightman, 1947: 377). Most camera operators were

Figures 1(a) and 1(b). In *Hair-Raising Hare* (Chuck Jones, 1946), the cel on which Bugs Bunny's head is painted is dropped for one frame. His head is restored in the subsequent frame. Screen grabs from Warner Home Video DVD, 2003.

also responsible for cleaning the glass platen with an air hose between each shot. In an episode of the *Woody Woodpecker Show* from the 1950s, Walter Lantz offers a behind-the-scenes look at this part of the process. 'If he didn't do this, every speck of dust would show up on the screen', Lantz narrates. A dust- and hair-covered image is shown: 'We call it a snowstorm, and we certainly don't want this on our films'. The term 'snowstorm' recalls the 'rain effect' described by Yuri Tsivian (1998: 105) in his work on the reception of early film in Russia. He quotes a 1916 technical manual on the effect:

> Since … a scratch mark in the corner of the picture is rapidly followed by one in the middle or at the top, it looks as though they are dancing all over the place, sometimes in dense clusters, sometimes scattered all around the image. If there are a lot of these defects the screen will appear to be covered with a fine veil of flickering white specks, or a shower of 'rain'.

What distinguishes 'snow' from 'rain' is that the former has an existence before the camera lens, while the latter is a mark on the body of the film itself. Significantly, the two afford similar aesthetic experiences and, moreover, prompt us to ask what we are looking at.

Figures 2(a) and 2(b). In *Porky Pig's Feat* (Frank Tashlin, 1943), a cel on which Daffy Duck is painted is placed before the camera lens with its verso side up. In the subsequent frame, the cel has been flipped over to reveal the recto side. Screen grabs from Warner Home Video DVD, 2005.

Sometimes, of course, it is easy to tell when and how the image was marred. For example, in an early scene in Bill Roberts's *Brave Little Tailor* (1938), Mickey Mouse fends off a swarm of cartoon flies while all around him also flit what are obviously specks of dust – he may be oblivious to them, but we are not. Other spots and arabesques, however, seem to float between 'the photographed' and 'the photograph', as when Newton's rings subtly ripple a pond in a scene from Jones's *Go Fly a Kit* (1957). Through this pond swim also pale green dots and lines – not minnows but tiny accidents and anomalies of uncertain provenance.

Dust, in all the epistemological and ontological instability it presents (and represents), is thus an especially redolent detail. It evokes Theodor Adorno's (1967: 240) characterization of the method guiding Walter Benjamin's *Arcades Project* as a 'technique of enlargement', in which 'small or shabby objects like dust and plush' are set into motion; plush, Benjamin (1999[1927–1940]: 222) writes, is 'the material in which traces are left especially easily'. Dust returns us to Dai Vaughan's (1999: 4) observation that early film audiences were most impressed with 'what would now be

considered the incidentals of scenes: smokes from a forge, steam from a locomotive, brick dust from a demolished wall'. It conjures up the physical object that animation photographically reproduces, and reminds us of what is lost in photographic reproduction. What could that dust tell us if we could see it, touch it, even inhale it? If 'the étuis, dust covers, sheaths with which the bourgeois household of the preceding century encased its utensils were so many measures taken to capture and preserve traces', as Benjamin (1999[1927–1940]: 226) writes, then nitrate and acetate celluloid sheets are the plush of animated cartoons, capturing the traces of what touches them. Indeed, acetate is commonly used to 'lift' fingerprints from crime scenes. 'It is astonishing that we have so much oil in the skin of our fingers', Shamus Culhane (1988: 253) remarks, 'but even more astonishing is the ease with which it is transferred to cels.' Like dust, fingerprints become visible only when the cel is photographed, when the light hits it in just the right way. One marks the beginning of Clampett's *Goofy Groceries* (1941) and two oily smears drift over the Dalí-inspired world of Freleng's *Dough for the Do-Do* (1942). These indexical traces slipped through in spite of the many precautions taken by inkers and painters to avoid touching the cels with their bare hands. It takes human errors such as these for animation's mechanical nature to be acknowledged. Each and every frame then seems haunted, not by the ethereal but by the corporeal; at any point, we sense, physical reality will intrude and, in the words of Siegfried Kracauer (1997[1960]: 156), take its 'revenge upon those who dare to desert it'.

The index

Animated cartoons erase the humans and technology that produce them. Such is the power of movement and, hence, of animation – or, as Sergei Eisenstein (1988[1940–1941]: 54–55) famously phrases it, '*If* it moves, *then* it's alive; i.e., moved by an innate, independent, volitional impulse'. So potent is this sensation that it overwhelms our ability to see animated cartoons as human- and machine-made, as animated by anything but themselves:

> We *know* that they are … drawings, and not living beings.
> We *know* that they are … projections of drawings on a screen.
> We *know* that they are … 'miracles' and tricks of technology, that such beings don't really exist.
> But at the same time:
> We *sense* them as alive.
> We *sense* them as moving, as active.
> We *sense* them as existing and even thinking! (emphases in original)

To remember that animation is photography is not enough, for memory cannot compete with the present tense of the animated cartoon. Eisenstein is attracted to animation because it returns the viewer to a pre-logical state in which thought and movement are undifferentiated. Because it moves, it thinks. Because it thinks, it moves. It doesn't need outside intervention. Animation is phantasmagoric, in the sense advanced by Marx in *Capital* and developed by Adorno (2009[1937–1938]) in his writings on Richard Wagner: animated cartoons seem to be self-producing. For Adorno, Wagner's operas are characterized by an 'occultation of production'; they 'make us forget that they have been made' (p. 72). Their closest analogue, he continues, is

> the consumer goods of the 19th-century which knew no greater ambition than to conceal every sign of the work that went into them, perhaps because such traces reminded people too vehemently of the appropriation of the labour of others, of an injustice that could still be felt. (p. 72)

Adorno's suspicions about the relationship between the work of art and the commodity are confirmed by a passage in Honoré de Balzac's (1900[1846]: 63) *Modeste Mignon*:

> You, under the arbor of clematis where you dream over poetry, cannot smell the stale cigar smoke which depoetizes the manuscript, just as when you go to a ball, dressed in the dazzling products of the jeweler's skill, you never think of the sinewy arms, the toilers in their shirt-sleeves, the wretched workshops whence spring these radiant flowers of handicraft.

And we see this same impulse guide how we respond to the animated cartoons made by an industry continuously roiled by labour strife. They force us to forget how they have been made. The world presented by animated cartoons seems to be wholly distinct from our own. It is not subject to our physical laws; moreover, it shuts out the possibility of the camera revealing these laws.

How, then, do we cut through the clematis? For the late photographer Allan Sekula, this question was imperative. In an essay on how to write about photographs of miners in Nova Scotia, Sekula (1983: 201) argues: 'We need to understand how photography works within everyday life in advanced industrial societies: the problem is one of materialist cultural history rather than art history.' He thus privileges the photograph as a historical document – but not therefore as 'a transparent means to knowledge' (p. 198).

Rather, the photograph becomes, for him, an object in which knowledge hides, an object out of which knowledge must be startled. The photographs taken in American animation studios – the photographs, that is, of which animated cartoons are composed – are just as socially and politically fraught as the objects of Sekula's study. They invite the same level of scrutiny and provoke the same contradictions. Sekula declares: 'The archive has to be read from below, from a position of solidarity with those displaced, deformed, silenced or made invisible by the machineries of profit and progress' (p. 202). We look at the visual archives that are animated cartoons, in other words, to see what is not there, to locate what has been obscured. Most often, it is the labour-intensive photographic process that is silenced by the movement of the film through the projector, a labour process that is only restored when we reenact it through the frame-by-frame examination of each photograph.

A model for this method is the work of the contemporary artist Andrew Norman Wilson, whose photographic series *ScanOps* (2012) consists of inkjet prints of pages from books digitized by Google subcontractors. The pages selected by Wilson are all marked by what he calls 'anomalies', such as text warped by software glitches, illustrations rendered as black blobs by high-contrast scans, or the hands of the workers doing the page-by-page scanning day in and day out. The workers and their work are meant to be invisible, but Wilson's photographs disclose 'the disturbances in what is supposed to be a seamless interface' (Doulas, 2012): although their fingers are often gloved so as not to leave any telltale prints on the book it is propping open, they nonetheless make an impression of a different kind. 'I like to think of each image – whether it contains accidents or not – as a view of the world', Wilson explains. 'They reveal traces of the humans and technology that produced them' (Ptak, 2013).

'Simon Newcomb – 49', a photograph in the *ScanOps* series, seems at first to be a monochromatic print, a rectangle of dark red. But in the lower left there appears a small pink ovoid spot – the tip of a finger, its loose latex covering ever-so-slightly wrinkled. Wilson's photograph is at once abstract, a play of colour, shape, and scale, and mimetic, insofar as it is a physical reproduction of the 49th page of Google's downloadable pdf of the 4 December 1909 proceedings of the Philosophical Society of Washington (see Wead, 1910). Originally published as a slim volume bound in a lightweight auburn jacket, the proceedings were digitized on 9 March 2009. The resolution of the pdf is detailed enough to reveal the matte texture of the paper and even a faint 'Harvard

University Library' stamped in relief on the cover's recto side, or the sixth page of the pdf (it is also legible as a backward embossment on its verso, the seventh page of the pdf). Markings in pencil are distinguishable from those committed in ink, and no one would take the 'Digitized by Google' watermark in the lower-right corner to be part of the source document. Another page from the pdf is included in the *ScanOps* series, but Wilson frames the two separately. Stripped of context, they become Surrealist found objects, which Wilson then recontextualizes as 'part of the photographic apparatus, which in a broad sense includes not only the machinery but the social systems in which photography operates' – a system that comprises, as Wilson enumerates, 'the anonymous workers, Google founders Sergey Brin and Larry Page, the pink 'finger condoms', infrared cameras, the auto-correction software, the capital required to fund the project, the ink on my rag-paper prints, me – we're all part of it' (Ptak, 2013). Importantly, Wilson insists on calling what he does *photography*:

> I prefer to call what I'm collecting photographs as opposed to scans. Mass market books can be sliced open and fed into scanners, but the books I'm looking at come from library collections and need to be photographed from above … They're both indexical and medium-specific. Their processes, digital manipulations, and material supports are folded within them. (Doulas, 2012)

By 'indexical', he means to stress how the photographs are the effect of a specific physical cause. Some of his examples also bear an iconic resemblance to their external referent (i.e. we can recognize a finger propping open a page as a finger propping open a page), but others, such as the whirlpools of text that result from a glitch in the scanning software, look as much like their source as feces do a hunted fox or a column of mercury does a fever. In either case, the photographs qua photography testify to the existence of the world outside them.

By 'medium-specific', meanwhile, he wishes to draw attention not to what the photograph represents but rather to what the photograph *is made of* – the material specificity of the medium itself. For a digital photograph, this is its ones and zeroes, its vectors or rasters. The physical reality to which the photograph thereby bears witness is itself: it says, *I* am here. Thus an out-of-focus or pixelated photograph has not failed to show us what we want to see but, in fact, tells us about the very stuff of the photographic apparatus, from the camera lens to the editing software. These are what Hito Steyerl (2009) has called 'poor images', the quality of which speaks volumes: they 'testify to the violent dislocation, transferrals, and displacement of images – their acceleration and circulation within the vicious cycles of audiovisual capitalism'. The photograph, no matter how it looks, is always a fragment of the world. Wilson's is a forensic gaze; everything becomes a clue, even (and perhaps especially) that which is not immediately recognizable as such.

Traces of production

Of course, many animated cartoons gesture to the world that made them. Consider Chuck Jones's *Duck Amuck* (1953), a cartoon lauded for its skewering of cinematic conventions. Throughout the film, Daffy Duck is tormented by the pencil and paintbrush of an animator who, at the film's conclusion, is revealed to be none other than Bugs Bunny. ('Ain't I a stinker?', he gloats to the audience, his right hand still clasping the pencil.) However, as Dana Polan (1987[1974]: 351) has argued, the film amounts to a closed loop, a self-generated phantasmagoria in which cartoon characters create themselves. The world of *Duck Amuck* makes no allowances for *our* world. Its narrative elides the actual human labour that went into its making. By foregrounding its artifice, the cartoon paradoxically 'erases any traces of its own production process'.

To open the loop, to restore these traces, one must watch the cartoon not for its self-reflexive narrative but instead as a series of photographs with an evidentiary power: *the paintbrush we see was itself painted*. If understood in this way, one can learn to recognize the constructedness of *Duck Amuck* and other films in which scenes and characters appear to be painted before our eyes, such as Jones's *Rabbit Rampage* (1955) and Disney's *Aquarela do Brasil* (1942) and *All the Cats Join In* (1946). These films deploy what is called a 'wipe-off' technique: the sequence is shot in reverse as the completed image is progressively wiped away, exposure by exposure. What this means is that we are witnessing not the painting process, as in Henri Clouzot's *Mystery of Picasso* (1956), but rather the *erasing* process. In many instances, the paint is not fully wiped off; it leaves a slight, ghostly impression on the cel. A frame from *Duck Amuck* is thus like a photograph of Robert Rauschenberg's *Erased De Kooning Drawing* (1953). A white picket fence is there but not there, the faintest of smudges. More noticeable is the difference between the cel painting that is still wet, to make the wipe-off procedure cleaner, and the cel painting that is dried. When the putative film frame collapses on Daffy's head, Bugs helpfully paints him a stick to help prop it back up. As it is being painted (i.e. erased), the stick is yellowish-brown, closer to tan. Once it has been fully painted, it takes on a hue closer to raw umber.

I am here tracing traces, traces that intersect, overlap, disappear. They do not, however, loop back on themselves. The trail we follow leads not to a singular artist, to Bugs Bunny or to Chuck Jones, but to the whole system of markings, of traces – fingerprints pointing every which way. These cartoons – their brushstrokes, their inked lines, their erasure marks, their transparencies, their opacities – are not closed compositions. Instead, they are difficult, demanding, and dense – centrifugal and centripetal. They show and they hide.

Thanks to industrial controls, the actual hand of the photographer never makes its way into works of cel animation. But animated cartoons produced by more artisanal methods, such as Raoul Barré's slash-and-tear system, are here and there marred by an errant hand. For instance, the camera operator's index finger is captured in frames scattered throughout Max Fleischer's *Jumping Beans* (1922) (Figures 3a, 3b, and 3c). Each instance alerts us both to the inefficiencies and irregularities that made slash-and-tear uneconomical for large-scale production and to the flatness and graphic clarity and purity of these early cartoons, against which the volumetric, grey-toned, and inconsistently lit human hand resembles bas-relief. Importantly, these are not examples of what Donald Crafton (1993a: 11–12) has called the trope of 'self-figuration' so prevalent in early animation, 'the tendency of the filmmaker to interject himself into his film', often by deliberately including his hand in the image. These are, rather, *disturbances*, exactly like those documented in Wilson's *ScanOps*: for a split-second, the hand of the worker appears on screen; for a split-second, the worker's labour becomes visible.

These moments hold out an *aesthetic* interest. They pull against the space of the frame, directing our attention outward, centrifugally. But they also push inward, in that they make the peripheral detail the central axis of the screen. Robert Breer's *Fuji* (1974) provides an example of how this aesthetic possibility erupts. While *Fuji* is a work of experimental animation, not an animated cartoon, it can be considered a limit case that differs only in degree from *Jumping Beans*. *Fuji* is a study of flatness and depth, of movement and stillness. Most of the film consists of footage Breer first shot with a Super-8 camera while traveling by train in Japan and then rotoscoped onto index cards using pencils and markers. As the footage unfolds, the film tests the iconicity of Mount Fuji: what does it take for it to be identifiable? As it turns out, just a tiny black triangle can be enough, or even an upside-down V. Around the time Breer was working on *Fuji*, Roland Barthes (2002[1983]: 158) found himself looking at his own index card collection and musing on this very question:
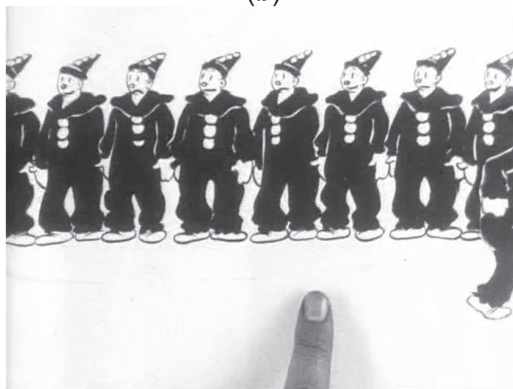
> In the blue lining of an envelope that [by] chance, after detaching it from its backing, outlines against a partition in one of my boxes, I suddenly see the silhouette of Fujiyama; and so, playfully, on top of the crater I place a faint cloud inside which I write—since this is the function of my box—'to be filed'.
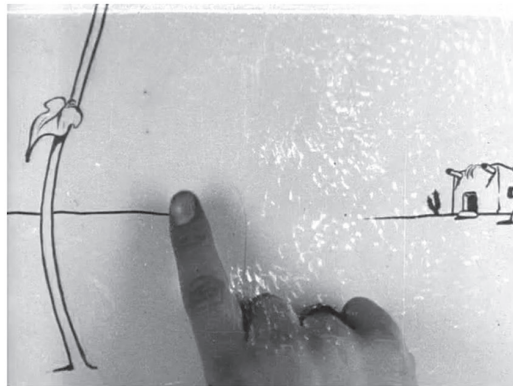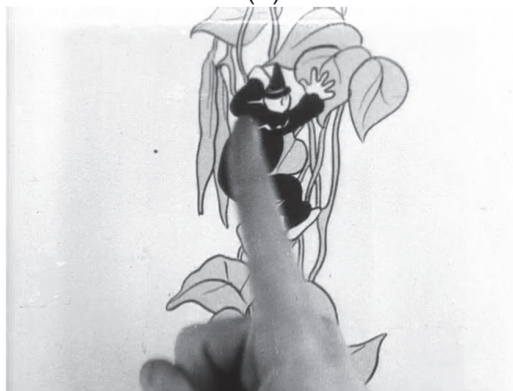
Figures 3(a), 3(b) and 3(c). Not-the-Hand-of-the-Artist-Trope: The camera operator accidentally photographs his own fingers in these selected frames from *Jumping Beans* (Max Fleischer, 1923). Screen grabs from Warner Home Video DVD, 2007.

In Breer's film, this experiment in gestalt plays out on the surface of the screen. At the same time, the fact that the footage has been rotoscoped gives us the sensation that something has been covered up and now lurks just below the surface of the image. At the outset of the film, Breer

provides glimpses of the source footage, but these then recede beneath the layers of index cards and ink. Only one frame breaks both the rhythm of the film and the dynamic tension between the photographic Mount Fuji and the graphic Mount Fuji – a frame in which Breer's hand comes from *above*, having been captured in the moment of reorganizing the cards in front of the camera lens. The dramatic shift in the scale and depth of the image momentarily points outward, while affirming the dynamism of the drawings Breer is fingering.

But these are exceptions. Rare is the animated cartoon that shows us exactly what we want to see. The hand is a convenient heuristic by which to measure labour. For this reason, Sekula (2014[1996]: 18) notes, it often stands as a synecdoche for the 'working body' in modernist photography (e.g. László Moholy-Nagy's photograms). More often than not, however, the photograph seems untouched. We must look for what isn't there. Or, rather, we must look at and into what *is* there: the photograph itself. Whether projected on a screen, displayed on a computer monitor, reproduced as halftone print, or glued to the pages of a scrapbook, a given photograph is as material as that which it represents. It is this materiality on which Andrew Norman Wilson's *ScanOps* series is predicated. The hundreds of thousands of scanned images that comprise Google Books cannot be treated as pure text, as pure information; in printing and framing selected scans, Wilson foregrounds the material procedures and networks that constitute photography.

This is not simply a question of the representation of human labour, i.e. of the photograph's iconic resemblance to the world. Photographs need not be 'legible' to seize us – indeed, they are often fuzzy, distorted, discoloured, their ostensible subject matter obscured by a software glitch or a Newton's ring. These obstructions are part of them. In fact, such interferences make us sensitive to the medium of photography itself: we only remember we are wearing glasses when they are smudged.

To look at animation as photography is to find the world that has been cropped out of the frame. This is the Bazinian axiom of the 'film as a window to the world'. But it is also to find the world *within* the image, to study the windowpane as well as the view beyond it. A cartoon documents and dramatizes India ink, watercolor paints, paper, glass, and stacks of transparent cellulose nitrate or acetate sheets; particles of dust traverse half the screen and fleeting, spectral reflections are cast by the animation stand's overhead lights; Newton's rings knit together. And yet animation betrays the graphic of the photographic. A line might be a gesture of ink, a particle of dust on the cel, a hair in the gate of the camera or the contact printer or the projector; the camera lens becomes an element to be photographed, inseparable from the other transparent plates and sheets before it; the image assimilates the various physical and chemical agents that can affect a filmstrip. The disturbing presence of scratches, stains, and grain – or are they pen strokes, paint splotches, dust specks? – do not occlude the object but instead reveal the nexus of social, technological, and economic practices that is the photographic apparatus. To penetrate the animated cartoon, one must learn to navigate the corridors of images made labyrinthine by their low resolution and to look past the dense fog of film emulsion. Through this obscurity the world comes into view.

Acknowledgements

Funding

Notes

1. This, of course, is a highly condensed and necessarily reductive reading of Cavell. For a more nuanced analysis of Cavell's theory of animation, see Pierson (2012).
2. For a thorough investigation of another set of affinities between photography and animation, see Gunning (2014).
3. For studies of Bertillon's relationship to the rhetoric of documentary evidence, see Ellenbogen (2012), Tagg (1993), and Sekula (1986).

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Collaboration without Representation: Labor Issues in Motion and Performance Capture

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Abstract

Classical film theory topics, such as the divide between live action and animation, the definition of cinematic performance, and the configuration and impact of the star system continue to shape – while also being reshaped by – discourse on animation labor in the digital age. Focusing on motion capture in contemporary Hollywood, the first part of this article historicizes and examines the diminishment of the animators' contribution to this filmmaking process in promotional materials and public discussions, and the accompanying overemphasis on the star persona's performance. In doing so, it aims to contextualize and shed light on the practices and imperatives that determine current labor policies and power dynamics in the industry. The second part introduces questions of gender relations and gender-based hierarchies of representation into the discussion of motion and performance capture's labor climate. In order to highlight and reflect on the ambivalence of the motion capture industry's labor politics, it offers a feminist reading of a distinct, yet related form of disenfranchisement in motion-capture filmmaking, namely digital voyeurism and the objectification of the female performer in films such as *Beowulf* (Robert Zemeckis, 2007) and *Avatar* (James Cameron, 2009), and video games such as *Beyond: Two Souls* (Quantic Dream, 2013). Finally, by highlighting such interrelated policies of marginalization and erasure of labor, the author aims to emphasize the inadequacy of describing motion capture as a collaborative process and to call for a reconceptualization of the critical approaches towards its study.

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Introduction

Andy Serkis, arguably the most globally recognizable motion-capture performer thanks to his work for blockbusters such as *Lord of the Rings* (Peter Jackson, 2001–2003), *King Kong* (Peter Jackson, 2005), and *Dawn of the Planet of the Apes* (Matt Reeves, 2014), describes acting for motion capture in the following terms: 'acting is acting and visual effects are visual effects and it's a marriage, but the authorship of performance – everything you watch on screen that you feel and think about a character – comes from the actor' (Hiscock, 2014). There is something reassuring about such a simple, straightforward account of this intricate process. Perhaps this is why this definition has been widely echoed in popular discourse, giving birth to the notion that credit for the computer-generated characters in motion-capture films belongs primarily to the actor who modeled them. The real picture, however, is more complex.

Take, for instance, Gollum, the digital creature that made Andy Serkis a star. Even though Weta Digital's artists used footage of Serkis for reference, they created Gollum's face from scratch using blend-shape animation (Prince, 2012: 128). Since then, digital technology has improved manifold, to the point where recent films like *Dawn of the Planet of the Apes* can capture actors' expressions thanks to facial camera rigs used in a more sophisticated form of motion capture referred to as performance capture (Fordham, 2014: 68). Although the two terms are often erroneously applied interchangeably, particularly in popular discourse, differentiating between them is important not simply for the sake of technical accuracy, but because the distinction between them – specifically performance capture's use of actors' facial gestures – is often foregrounded in industrial discourse with the aim of framing acting as central to the process. However, animators' labor remains essential to the success of the final product. Dan Lemmon of Weta Digital explains that *Dawn*'s camera setup is still incapable of reconstructing exact facial expressions, such that 'it requires artistry, craftsmanship and interpretation … to match the actor's expressions' (Fordham, 2014: 72). Similarly, keyframe animation was used in James Cameron's performance-capture blockbuster *Avatar* (2009) to hone the body language of the Na'vi and ensure the expressivity of their emotions (Whissel, 2014: 105).

Studios, scholars, and the general public are still in the process of determining how to meaningfully discuss a symbiotic production process like motion- and performance-capture filmmaking. A common refrain that has entered the discourse is the description of the process as quintessentially collaborative. For instance, in a diplomatic gesture likely meant to smooth over the public tensions over Gollum's ownership, Randall William Cook, director of animation for the *Lord of the Rings* trilogy, has stated that 'Gollum was a synthesis, a collaborative performance delivered by both Andy and a team of highly-skilled animation artists' (Amidi, 2014). Similarly, Matt Reeves has described the creation of Caesar the ape in the following terms: 'There is no Caesar without Andy and there is no Caesar without Weta' (Desowitz, 2014). On the surface, the image of collaborative work performed by interdependent units operating together that such statements offer to the public appears to celebrate labor equality. However, the use of the term 'collaboration', with its linguistically encoded connotation of an equal partnership, is in fact a rhetorical strategy used in industry and media discourse to subtly undermine animation labor by implicitly equating its impact and importance for the final product to that of acting. As this article will demonstrate, collaboration discourse's portrayal of the production process is ambiguous and imprecise, contributing to what Mary Desjardins (2015: 20) has described as 'the erosion of discrete labor categories in the contemporary film industry'. Crucial information, such as the nature, extent, and relative importance of animators and visual effects artists' specific contributions is typically glossed over or completely omitted (except in specialized trade publications such as *Cinefex* and *VFX World Magazine*). In this way, framing motion and performance capture filmmaking in terms of collaboration enables

studio executives and media outlets to ostensibly acknowledge animation labor as an important component of production while de facto avoiding any explanation or reflection on its actual impact and significance.

Indeed, despite the enduring importance of digital effects artistry, the animators' labor is rarely acknowledged in contemporary conversations about motion and performance capture. Instead, as Lisa Purse (2013: 56) has observed, popular discourse and promotional materials focus on a 'visible form of performance creation in which the human contribution is highly legible, via the paratextual footage of actors emoting and gesturing expressively in special suits and camera head rigs'. This removal of the animator from the spotlight, coupled with misleading assertions regarding the actor's exclusive ownership of the motion-captured image, diminishes the labor of animation teams, as well as the 'months spent in building highly detailed facial capture rigs, and then painstakingly observing reference footage and keyframing the nuance of eyebrow twitches and lip quivers' (Bode, 2010).

In contemporary film and video game industries, the work of animators continues to be inscribed within and interpreted vis-à-vis long-standing film theory debates, such as the animation and live-action divide, as well as the star system and the accompanying focus on acting. In the first half of this article, I will focus on animation labor in motion and performance capture and examine how it problematizes and is in turn impacted by such well-established pre-digital norms and discourses. I will study the systematic erasure of the animators' contribution from public conversation in order to tease out the factors, policies, and values that determine power dynamics and labor configurations in digital-era Hollywood. In the second half, I will introduce questions of gender dynamics and gender-based hierarchies of representation into my study of motion and performance capture's labor climate. Gender is a productive and necessary category for understanding discourses on labor in digital media industries because it helps illuminate the ambivalence at the core of the motion-capture industry's labor politics. As the article will show, while films like *Beowulf* and *Avatar* misrepresent the motion-capture production process in order to strengthen their digital characters' claim to bearing indexical traces of famous actors, they simultaneously invoke the alleged nonindexicality of digital imagery in order to normalize their treatment of the female star as a glamorous, hypersexualized body.

While essentially contradictory, both of these policies are rooted in animation's fraught labor histories and, when studied in relation to each other, provide insight into the relationship between labor and aesthetics that shapes and defines motion- and performance- capture discourse. Additionally, placing these distinct, yet related forms of labor marginalization facilitated by performance capture in conversation with each other highlights the importance of considering who is made visible by digital media industries both on and off screen, and how this is achieved. In order to illuminate the relationship between exposure and power in the context of gender relations in motion and performance capture, the second half of this article will analyze digital voyeurism and the persistent objectification of the female motion-capture performer and her digital body, engaging both recent and classical feminist film and media theory. In doing so, it will also rethink collaboration discourse vis-à-vis gender dynamics in order to reveal how and why a concept such as collaboration – which, through its implication of equal partnership, glosses over the many forms of discrimination and disenfranchisement in today's entertainment industry – remains problematic and necessary to question and challenge.

The art of misdirection: Motion capture and industry discourse

In the recent decade, motion capture has evolved from a relatively obscure technology to a mainstream practice in film and video game industries. Still, there is remarkably little clarity – at least in

popular discourse – about what the motion- and performance-capture processes entail. This is largely due to inaccurate descriptions offered by actors and studio executives and propagated by the popular media. For instance, Zoe Saldana has stated that 'motion capture makes it impossible for an animator to take any kind of credit over a performance [because] an animator paints over the performance that the actor leaves on screen' (Madison, 2014). Such gross oversimplifications present motion capture as a technological miracle capable of directly translating an actor's performance into a digital creature, as if by magic. In reality, recording an actor's movements in motion capture yields a 'starting set of data points' that animators build upon. In most cases, these data points do not readily correspond to the desired end product (for example due to differences in size or skeletal structure), so the visual effects artists need to retarget them to fit the body they are meant to represent (Letteri, 2015). To borrow Lisa Purse's (2013: 56) formulation, motion-capture data is best thought of as 'an abstraction of the actor's movements' that is altered and edited by animation.

It is easy to find detailed, accurate breakdowns of the motion- and performance- capture process – provided that one seeks them out in trade journals. Meanwhile, popular media largely neglects visual effects artists, and turns the spotlight onto the movie star, who is most often presented as 'the not-so-secret ingredient which makes the difference between successful and unsuccessful digital protagonists' (Purse, 2013: 54). This practice is not limited to the film industry. *Call of Duty: Advanced Warfare* (2014) features a character performed and modeled after Kevin Spacey, while *Alien: Isolation* (2014) marks Sigourney Weaver's return to her iconic role as Ellen Ripley. A *New York Times* article on Spacey defines performance capture vis-à-vis the actor's performance ('an emerging blend of the physical and the digital in acting'), assuring the reader that Spacey's face has been captured 'down to the pores'. No meaningful account of the animation labor that enabled such realistic representation is included (Suellentrop, 2014).

A widely used rhetorical strategy for taking ownership away from animators consists of comparing motion-capture animation to makeup and prosthetics.[1] Andy Serkis has claimed that

> Weta digital … have now schooled their animators to honor the performances that are given by the actors on set … It's a given that they absolutely copy [the performance] to the letter, to the point in effect what they are doing is painting digital makeup[2] onto actors' performances. (Woerner, 2014)

As animator Eric Furie points out, 'the implicit sentiment seems to be that even the poorest actor can act better than the best animator' – a claim that is as far-fetched as it is offensive to animation teams who 'have had to extensively clean up, radically alter, or even throw out a shot performed by a "real actor"' (Sito, 2013: 212). Indeed, comparing animation to makeup delineates performance as the exclusive domain of the actor (and, by extension, of live-action cinema), denying the key role that animators play in ensuring that digital creatures act and emote in believable ways.

These instances of deliberate erasure of animators' contributions from the public domain in favor of acting are facilitated by the two groups' relative positions within the Hollywood industry: the lack of union representation of visual effects artists on one hand and the powerful lobby of the Screen Actors Guild (SAG) on the other. To quote Scott Ross (2013), the co-founder and ex-CEO of Digital Domain, 'the VFX community is partially to blame because it has not valued itself. We have no trade association, no union, no common voice.' In that sense, the emphasis on acting in motion capture has become a dominant narrative partially because there is no unified effort to counteract it. Conversely, the successful redefinition of motion capture as a synonym for digital acting can be attributed to the SAG's concerted strategic efforts to ensure better pay and contractual benefits for motion-capture performers.[3] On 22 February 2010, the SAG formed a national Performance Capture Committee whose main stated goals were to 'educate its members about motion capture and to lobby for coverage of motion-capture work under the guild's

master contract' (Freedman, 2012: 44). The committee spearheaded a movement to replace 'motion capture' with 'performance capture' in order to 'shed a better light on what the actors do and how these films are created' (Nestor, 2011).

In order to brand motion-capture performance as authentic acting, contemporary media repeatedly evokes classical film theory concepts and pre-digital discussions about cinematic performance. For instance, Katie Kilkenny (2014) refers to Andy Serkis as 'the ultimate Method actor, who reportedly spends months observing apes in their natural habitat to play them', effectively drawing a historical lineage to Stanislavski's system in order to portray Serkis as a digital-era Marlon Brando. Tanine Allison (2011: 338) argues that this rhetorical strategy is a way of 'reassuring viewers that these new techniques still participate in long-lived cinematic traditions'. Given the SAG's current goals, however, it is likely that portraying motion- and performance-capture acting as a straightforward, unproblematic continuation of classical Hollywood practices is as motivated by labor politics as it is by audience needs.

In addition to the actors themselves, directors and studio executives also participate actively in the promotion of performers' labor at the expense of animators and visual effects artists. James Cameron describes the work of animators in the following dismissive terms:

> There may be a whole team of animators to make sure what we've done is preserved, but that's their problem. Their job is to use the actor's performance as an absolute template, without variance, for what comes out the other end. (Sito, 2013: 212)

Meanwhile, *Avatar*'s producer, Jon Landaur, has dubbed motion capture 'the twenty-first century version of prosthetics, something that would allow actors to play fantastic characters that they could not otherwise play' (Prince, 2012: 135).

Once again, agency and ownership of the digital character are presented as belonging solely to the actor, while animators' work is seen as supplementary. Such statements (however misleading) support the SAG's aforementioned agenda by lending credibility to actors' claims regarding the importance of their role in the motion-capture process. For producers and filmmakers, shining the spotlight onto the marketable film star is likewise crucial, as it increases the public visibility and appeal of the project. Furthermore, Lisa Bode (2010) points out that, by foregrounding acting instead of animation, directors aim to solidify their own status as traditional auteurs directing a performance in real time and ward off any speculation that digital technologies may be diminishing their role in filmmaking by decentralizing the production process more than ever before.

Such attempts to fit motion capture within pre-digital notions of what cinema is are not limited to Hollywood blockbusters. Leos Carax's arthouse drama *Holy Motors* (2012) features a mesmerizing motion-capture scene in which the film's protagonist performs acrobatic feats and engages in simulated sex with a female contortionist. The resulting computer-generated imagery is subsequently revealed to be underwhelming, failing to achieve the enigmatic grace of the actors' movements. As critics have noted, this subtle mockery of computer-generated imagery celebrates the human form as the true source of cinematic magic (Boone, 2012). In that sense, Carax joins the chorus of voices arguing that the digital turn has done little to challenge the position of acting as the driving force behind cinematic affect. At the same time, Dan North (2013) has observed that this scene does not merely satirize motion capture, but, in evoking Étienne-Jules Marey's chronophotographic motion studies, attempts to 'unite cinema's modern adjunct technologies to the medium's prehistory'. Thus, by portraying motion capture as an opportunity to return to the pure kinetic energy of early live-action cinema, *Holy Motors* exemplifies live-action filmmakers' efforts to reclaim this technology on behalf of film (as distinct from animation).

The threat of the digital actor: Anxieties and misgivings about motion capture

The systematic exaggeration of the actor's contribution seen today is a marketing strategy and a nod to pre-digital cinema discourse, but it is not exclusively the product of industry politics. The overemphasis on the human referent in digitally generated imagery is also a technophobic defensive response. As soon as computer software reached a level of sophistication allowing for the production of convincing-looking animated humans, heralds of the digital apocalypse were quick to proclaim that the replacement of the actor with a fully digital performer is only a matter of time (Aldred, 2011). In 2009, Jeff Bridges predicted that actors will soon be a thing of the past: 'We'll be turned into combinations. A director will be able to say, "I want 60% Clooney. Give me 10% Bridges and throw some Charles Bronson in there"' (Abramowitz, 2010). His statement echoes Dan North's (2008:155) observation that the digital actor 'represents a contemporary manifestation of the Frankenstein myth, embodying our own fear of replication and obsolescence'. Indeed, the performance-centric rhetoric surrounding contemporary computer-generated creatures is at least partially shaped by actors' efforts to retain a sense of agency and relevance in a changing production context.

These anxieties are likely provoked by the erasure of the actor's physical presence by motion-capture technologies. Scott Balcerzak (2009: 205) has noted that, in this type of filmmaking, 'we see the actor willfully surrendering his body to become a *purely* electronic subject … leaving only a streamlined electronic presence divorced from the body.' Indeed, the invisibility of the actor that motion capture entails threatens the very principles of star-driven filmmaking, as it short-circuits the affective relationship between the recognizable star and the viewer. This is likely the reason that some motion-capture productions, such as *Beowulf* (Robert Zemeckis, 2007), opt to design characters that closely resemble their human referents. In cases where such visual ghosting of the star is not an option, promotional discourse attempts to counteract the absence of the actor's body by insisting that the animated character has been infused with the actor's soul, presumably through motion capture's heretofore unexplored mystical powers. Following the release of *The Adventures of Tintin* (2011), Steven Spielberg assured viewers that 'if Tintin makes you feel something, it's Jamie Bell's soul you're sensing' (Abramowitz, 2010). Apparently, even the indefinable, unobservable spirit of an actor is more likely to receive credit for the success of a computer-generated character than the team of animators responsible for said character.

Misgivings about the actor's changing status in the digital age have been internalized and articulated in cinematic narratives dramatizing potential technophobic scenarios. Andrew Niccol's 2002 film *S1m0ne* explores the implications of a fully digital woman taking the place of – and successfully passing for – a Hollywood actress. This film exemplifies the mixture of paranoia and cynicism that defines the view of digital technologies as inherently harmful to cinematic tradition, broadly understood as embodied by the classic Hollywood system. Ari Folman's *The Congress* (2013) echoes this fear of the automated star; in this live action and animation hybrid, Robin Wright (who plays herself) is transformed into an eternally young digital avatar of herself owned by a studio. The parameters of her contract are as follows: 'we want to scan you … sample you, preserve you … we want to own this thing called Robin Wright.' The human Wright is indeed 'scanned' while being emotionally manipulated into displaying a range of emotions so that they can be captured and programmed into the new, improved, synthespian Wright. This is the ultimate SAG nightmare: a future in which, by replacing the human performer with an easily manipulated electronic database, digital technology redefines acting as algorithm (not art) and the performer as a relic of soon-to-be obsolete production models and labor laws.

Such scenarios remain firmly within the realm of fantasy. Nevertheless, a line of public discourse – predominantly aimed at actors – attempts to reverse the notion that motion capture might

soon make the actor irrelevant by suggesting that this technology is, in fact, the key to unlocking true versatility in performance. Tom Hanks, who performed as five different characters on *The Polar Express* (Robert Zemeckis, 2004), extolled the possibilities offered by this type of filmmaking: 'you will no longer be limited by your size, shape, skin color, age or gender. If you have the interpretation that the director wants for the role, then you can play any role' (Aldred, 2011). Similarly, visual effects supervisor Remington Scott (2003: 19) described motion capture as a 'medium for an actor to expand beyond type cast'. Such proclamations serve the SAG's interests in two ways: they restore a sense of agency to the actor by presenting motion capture as a tool developed to enable a greater thespian range while simultaneously raising awareness of new potential employment opportunities.

Invisible labor: A Hollywood tradition

While the particular anxieties outlined above are largely specific to the production context of motion capture, the policy of deliberately suppressing any public acknowledgement of the invisible labor that facilitates the star's performance is not limited to this technology. Natalie Portman's Academy Award bid for her leading role in Darren Aronofsky's *Black Swan* (2010) was bolstered by promotional discourse portraying the actress as a dedicated and hard-working professional who mastered ballet in 'ten months of vigorous work' and performed most of the dancing herself (Levy, 2010). In reality, the difficult moves required by the part were performed by ballet dancer Sarah Lane, whose face was digitally replaced by Portman's in post-production. However, *Black Swan* promotional materials omit any mention of Lane or the animation labor that allowed for a seamless merging of her performance with Portman's (Farley, 2011).

    Hollywood labor history is marred by a host of such obfuscations, omissions, and questionable marketing practices. For instance, while cinematographer Gregg Toland was widely celebrated for his work on *Citizen Kane* (Orson Welles, 1941), it is little known that at least 50 percent of the shots Toland received acclaim for were composites containing concealed optical printing work by RKO special effects technician Linwood Dunn (Turnock, 2015: 36). To give an even earlier example, press materials relating to the 1933 version of *King Kong* (Merian C. Cooper and Ernest B. Schoedsack) neglect to mention the film's use of stop-motion animation. In fact, they went so far as to insist that the Empire State Building scenes were performed by an actor in a gorilla costume (Allison, 2011: 330).

    In 20th-century animation history, it is arguably Disney that holds the dubious distinction of most long-lasting and wide-ranging policies of erasing and suppressing labor. For instance, the contributions of female performers to the studio's corpus of princess films – particularly those produced before the 1960s – remain largely ignored in popular discourse and downplayed in Disney historiography. In his recent account of the making of *Snow White and the Seven Dwarfs* (1937), J. B. Kaufman (2012: 40) acknowledges that Disney used the rotoscope technique (often considered the pre-digital predecessor of motion capture due to their shared goal of achieving realistic movement by recording human referents) during production of the film, but describes the role of Marjorie Belcher (the model for Snow White) in the following terms: 'the tracings [of live-action recordings of Belcher] did not appear in the film, but served as guides. After studying them, the animators could start afresh, constructing wholly original animated performance for Snow White.' Here, Kaufman's rhetoric effectively denies Belcher any credit for the finished animated performance, relegating her contribution to the footnotes of Disney history. And yet, Belcher was the first in a line of female performers whose labor helped shape the Disney legacy. Cinderella and Aurora shared the same human referent, actress and dancer Helene Stanley (Fleeger, 2014: 114). For *Sleeping Beauty* (Clyde Geronimi, 1959), the studio produced a full-length feature to serve as

reference material (Maltin, 1987: 74). In a fascinating reversal of contemporary promotional strategies, Disney's extensive use of live-action footage of actors and the role that these women played in the production process was kept from the press until the 1960s (Bell, 1995: 110).[4] The Disney studio had no use for stars because, during his lifetime, Walt Disney himself was invariably portrayed as the recognizable public face and living embodiment of Disney animation. In fact, the studio brand could only suffer from public evidence of the films' reliance on live-action recordings, as this would undermine any medium-specific arguments about the supposedly unique appeal of the animated image, repackaged here as 'Disney magic'.

Disney's treatment of female animation employees was even more overtly discriminatory and dismissive than that of performers. Kirsten Thompson (2014) writes that, from the 1920s till the end of the 1960s, gender-segregated labor was the norm in the Hollywood animation industry. Disney's Ink and Paint department, arguably the most notorious example of this, consisted of hundreds of women who had little alternative for employment at the studio. As Elizabeth Bell (1995:107) notes, the other position available to women during the early decades of Disney's studio was that of a stenographer producing transcripts of meetings. It is clear from looking at his correspondence that, for Walt Disney, 'animator' equaled male. In a 1932 memo regarding night classes for his animators, Disney wrote: 'There are a number of things that could be brought up in these discussions to stir the imagination of the men, so that … they're not just technicians, but they're actually creative people' (Maltin, 1987: 43). The implied divide is clear: women are technicians, men 'creative people'.

As this brief overview suggests, rather than merely highlighting problematic industry practices that are endemic to the field of motion capture, the issues discussed in the previous pages point to larger, persistent trends in Hollywood animation labor politics, specifically the continuing stratification of labor according to the profitability of its visibility. At the same time, placing motion capture in the context of the history of animation, visual effects, and acting labor also brings to light the need to consider this process from another critical perspective, namely the persistence of gender-based inequality in the entertainment industry. Labor issues in animation have always been linked to discrimination on the basis of gender and policies aimed at controlling the female presence both on- and off-screen. For this reason, a feminist reading of performance capture which studies how – and if – the digital turn has reconfigured gender power relations and power struggles within the current animation landscapes is necessary for understanding contemporary labor politics in digital media industries. Thus, in the rest of this article, I will shift the focus away from animators and onto female motion-capture performers and their digital avatars in order to examine how pre-digital attitudes towards women continue to impact 21st-century labor practices and shape popular discourse around them, while also tracing their interplay with the aesthetics and narrative of motion- and performance-capture features. In adding a gender-oriented reading to my analysis, I hope to avoid a one-dimensional account of labor issues in motion capture as a simple animator versus actor dichotomy, and consider the common roots and links between different forms of disenfranchisement in the industry. Furthermore, by studying how motion capture perpetuates patriarchal power dynamics and enforces existing gender inequalities in its organization of labor, I hope to further challenge and complicate the notion of motion capture as a collaborative process. After all, collaboration implies partnership, whereas the uneven distribution of authority and control in contemporary digital filmmaking precludes any possibility of such.

Voyeurism, sexualization, and the gendered digital body

Feminist media theorists have reflected on the disparity between the digital era's utopian promises of transcending the limits of the physical body and redefining body politics, and the actual impact

of the evolution of digital technologies, namely the upholding of the status quo vis-à-vis norms of gender and sexuality. In her discussion of virtual reality, Anne Balsamo (1996: 161) writes that, even though 'the representation of gender is supposed to have given way to its technological effacement … gender distinctions persist in the new social spaces of virtual worlds.' Furthermore, she points out that, in virtual reality applications, the position of hero is typically reserved for men, while 'cyberspace playmates are usually beautiful, sexualized, albeit sometimes violently powerful women' (p. 130). The conclusion she draws is relevant to performance capture as well: 'it is apparent that although cyberspace seems to represent a territory free from the burdens of history, it will, in effect, serve as another site for the technological and no less conventional inscription of the gendered, race-marked body' (p. 131). Along similar lines, Rocío Carrasco (2014: 43) has observed the following:

> the gendered body is still being performed in virtual realms, in spite of some significant advances … 'The cyber-body' expresses existing cultural values, negating the idea of a postcorporeal male or female identity. As a consequence, social norms of beauty, fitness, and health continue to inform these bodies.

While not directly addressing performance capture, such studies offer insight into the ideological climate that gives rise to the dominant gender frameworks and paradigms in contemporary digital media industries. As they reveal, the objectification and sexualization of the female body defined by Laura Mulvey in her seminal 1975 essay 'Visual pleasure and narrative cinema' remains a key contributor to the skewed balance of power in digital-era filmmaking.

Mulvey argued that 'going far beyond highlighting a woman's to-be-looked-at-ness, cinema builds the way she is to be looked at into the spectacle itself … Cinematic codes create a gaze, a world and an object, thereby producing an illusion cut to the measure of desire' (p. 10). In the 40 years since its publication, this essay has been revisited and criticized by feminist theorists such as E. Ann Kaplan bell hooks, Carol Clover, Jane Gaines, and Mulvey herself (to name a few). However, Mulvey's notion of an objectifying gaze encoded into the medium's definition of spectacle remains productive and relevant to my project, as it offers a gender-oriented framework for considering the ways in which new technologies, such as performance capture, perpetuate and revisit familiar modes of representation and looking. In fact, as I will demonstrate shortly, motion and performance capture have facilitated a form of voyeurism which offers sexual gratification while perversely inviting audiences to experience the act of looking at the digitally manipulated representation of the female star as less transgressive due to the absence of photographic nudity on screen.

It is not my goal to argue that male motion-captured bodies are never put on display or presented as spectacular. In the heteronormative framework of the majority of these narratives, the strapping male hero is indeed an object of desire, his sculpted body the very image of virile masculinity. However, not all nudes are created equal. As demonstrated later, male actors and their characters possess agency that is systematically denied to their female counterparts. As much as digital technologies may glamorize the male actor, they also empower him. While actors like Andy Serkis are granted authority and ownership of their performance and the resulting creatures both on and off screen, their female colleagues are often reduced to spectacular bodies. It is not the promise of a powerful performance, but that of the glamorized, alluring female form, digitized for everyone's viewing pleasure, that comes in focus, both narratively and in public discourse. For instance, *Beowulf*, which features Angelina Jolie as Grendel's mother, repeatedly invites the viewer – through both its marketing campaign and its cinematography – to think of Grendel's mother not as digital effect, but as a naked Angelina Jolie with a tail.[5] The trailer was met with headlines such as 'Angelina Jolie gets naked, or at least naked enough' (Hill, 2007) and 'Angelina Jolie "shy" about onscreen

nudity' (White, 2007). The second one in particular is ingenious in using Jolie's alleged shame to legitimize the notion of the digital nude body as hers. Jolie herself adds fuel to the fantasy by stating, in the same article, that she didn't expect herself 'to come out as much' in the character.

In the film, the ghost of Jolie's corporeal, material self is evoked via strong approximation of her facial features and her recognizable voice. Joanna Bouldin's (2004: 13) writing on the rotoscope rings true in this case, too: 'the rotoscoped image draws its power from its contagious contact with an original. Through this "material connection" the rotoscoped animated body is able to conjure the uncanny, supplemental presence of an absent body, the body of the original.' Indeed, by virtue of using the motion-capture process – and, crucially, by downplaying the extensive work done by animators – *Beowulf* claims to provide a digitally preserved facsimile of Angelina Jolie's desirable nude form. In reality, the digital Jolie does not offer a faithful imprint of the original, but a cosmetically altered version, as noted by reviewers such as Manohla Dargis (2007), who mocked the star's apparent digital breast enhancement, quipping that 'you could poke your eye out with one of those things!' Nevertheless, in the absence of photographic imagery, the promise that motion capture's digital trace still retains a lingering physicality speaks to the pre-digital impulse to see the star 'in the flesh', born out of a traditional understanding of cinema as a reproductive medium.

Part of the voyeuristic fascination evoked by Grendel's mother's naked scene comes from the tension between the denial of corporeality on one hand and the specter of stardom on the other. The false, but nevertheless persistent promise that motion capture does in fact seamlessly transfer the actor's body into a digital world is a sexual tease by definition. In such digital nude scenes, the technology simultaneously flaunts full exposure of the desirable body and effectively denies even a single peek. At the same time, these animated characters prompt careful and focused study that Vivian Sobchack (2006: 179) has called 'a hyperbolic form of judgmental attention'. The spectacular nature of the technology itself is an invitation to look even harder at the glamorously alien, yet tantalizingly familiar imagery.

Beowulf certainly encourages heightened scrutiny of the digital body. The camera dissects Jolie's animated double, voyeuristically lingering on different parts of her anatomy: her legs, her buttocks, her breasts. Recalling Mulvey's (1975: 11) description of the female star as a 'perfect product, whose body [is] stylized and fragmented by close-ups', this scene reads like a brief virtual tour of Jolie's commodified digital body.

Avatar takes the trope of the enticing digitally modified star even further by using Zoe Saldana's motion-captured performance to create Neytiri, an alien native character possessing both a feminine humanoid shape and animalistic features (blue skin, catlike face, pointy ears, and a tail). James Cameron has openly discussed the construction of Neytiri as a desirable sexual object, telling *Playboy* that 'she's got to have tits, even though that makes no sense because her race, the Na'vi, aren't placental mammals' (Rebello, 2009). Since Neytiri's face does not closely resemble Saldana's, erotic fascination with the female star is displaced exclusively onto the body, which becomes the site of the film's problematic racially charged neocolonial fantasies. Deborah Levitt (2012) observes that *Avatar* 'maintains the imperialist hypermasculinity of the blockbuster', pointing out that 'in the space of Cameron's particular version of networked fantasy, raced and gendered bodies become abstract, commodified schemata available for consumption as digital affective experience'. Saldana, a woman of color, is digitally transformed into an indigenous warrior maiden. Her character's exoticized body, barely covered in a stereotypical tribal outfit, is presented as more agile, faster, and stronger than a human one. *Avatar* features numerous shots of Neytiri crouching, crawling, jumping, and fighting. Such scenes make a spectacle out of her toned physique by showcasing her long and muscular thighs, her strong arms and her flat stomach. This voyeuristic impulse towards the racial other – narratively masked behind the pretense of ethnography – can be traced back to early experiments with live-action models in animation history, notably the Fleischer

Figure 1. Pandora's native vegetation provides partial coverage, offering audiences a tantalizing glimpse of an intimate moment between Neytiri and Jake Sully in *Avatar* (James Cameron, 2009). Frame grab from 20th Century FOX DVD, 2010.

brothers' *Betty Boop's Bamboo Isle* (1932), which projects the rotoscoped dance moves of Samoan dancer Miri onto Betty's 'island maiden' (Bouldin, 2004: 21).

Neytiri is not only a glamorous Amazon, but a sensual love interest for handicapped marine Jake Sully, who roams Neytiri's home world with the help of an avatar who resembles her race. Their sex scene, which occurs outdoors, as befitting the stereotype of the wild and free jungle woman, is shot from an overtly voyeuristic point of view (Figure 1). The camera, which circles the pair slowly, is partially obstructed by a cascade of pink translucent alien vegetation. This tantalizingly inefficient visual barrier places the viewer in the position of a peeping tom, facilitating an erotic fantasy of taking a peek behind the curtain. This ambiguous setup – an open, yet partially obscured space – invites a transgressive look. Moreover, the vertically hanging vegetation creates the illusion of encasing the two blue bodies inside a cage, enhancing the titillating animalism of the sexual union (and further highlighting the problematic racial politics of this film). Finally, as Sean Cubitt (2012: 235) has observed, 'the separation of Jake's body from his avatar seems to align his love-making with internet sex.' In that sense, while the blue alien avatar enables Jake's sexual fulfillment, Jake himself becomes the viewer's digital link (however tenuous) to Zoe Saldana's body.

Motion-captured erotic scenes are coded as equally, if not more, intense and appealing as live-action voyeurism, yet less transgressive due to their reliance on nonphotographic representation. To understand why this is the case, one must recall the privileged position that the index continues to enjoy in contemporary conversations about cinema, despite being repeatedly challenged in recent years, notably by Tom Gunning (2007: 31), who highlights the 'nonsense that has been generated specifically about the indexicality of digital media … which, due to its digital nature, has been claimed to be nonindexical – as if the indexical and the analog were somehow identical.' The supposed nonindexicality of digital animation is what enables performance-capture blockbusters to portray the female star as a spectacular, hypersexualized body. Headlines such as the aforementioned 'Angelina Jolie Gets Naked, or at Least Naked Enough' point to the resulting ambiguity that surrounds the digital nude in contemporary media discourse. As long as the persistence of

traditional views of cinematic realism continues to paint computer-generated animation as inherently less realistic than live-action, the digital body (however closely resembling its human referent) will be seen as artificial, inorganic, and intangible – and therefore open to manipulation and appropriation.

Thus, it is this belief in the unreality of the motion-captured nude that creates a problematic aura of harmless entertainment and encourages a sense of digital voyeurism as inherently less objectionable. Of course, one may argue that all voyeurism is, by definition, partially sanitized, as it is limited to the act of looking.[6] However, in the digital age, the dangers of dismissing, underestimating, and otherwise legitimizing the objectification of women in the entertainment industry under the guise of century-old medium-specific arguments about live action and animation's respective relationships to reality loom with new urgency. Consider, for instance, a relatively recent scandal involving motion-capture data of Ellen Page, who performed as the model for the character Jodie in Quantic Dream's 2013 game *Beyond: Two Souls* for Sony's PlayStation 3. Shortly after the game's release, user dgmockingjay posted – and kept reposting, following repeated removals – unauthorized screenshots of Jodie (who resembles Ellen Page closely) naked in the shower. While the shower scene is part of the game, it does not contain full frontal nudity; the nudes found online were generated by changing the camera angles on a debug version (i.e. not a wide retail version) of the console in order to reveal more of the character model than what is shown in the game (Hernandez, 2013). Sony issued a statement reminding players that 'it's not actually her body', likely alluding to the fact that the character is a fully animated creation based on reference footage of Page, or potentially admitting to the use of a body double (Usher, 2014). Nevertheless, most users who shared this perceived and advertised it as celebrity nude shots. Dgmockingjay titled his original post 'Uncensored pictures of Ellen Page from *Beyond: Two Souls*' (2013), inviting his target audience to freely conflate Page and her digital avatar.

This incident – which marks a departure from simply gazing at the erotic female image and a move toward manipulating and disseminating it – showcases the problematic possibilities for further exploitation of digital nudity opened up by existing technologies. Camille Nurka (2014: 485), who writes that 'the internet is rife with stolen and unauthorized uses of images of women, particularly in sexualized contexts', offers the following analysis of the internet's role in maintaining a patriarchal, heteronormative social order:

> This is a problem for women in particular because of the historical importance of aesthetics to dominant cultural ideas of what it means to be a female in public; in short, the proper place of the feminine in the public eye is as aesthetic object. This cultural embodiment, coupled with female hyper-visibility on the internet, means that the democratic potentials offered by internet technologies are inevitably bound to gendered forms of representation. Online polling systems and platforms devoted to generating public commentary are two democratic processes conspicuous for the ease with which they interpellate female bodies as objects of public judgment.

Moreover, the Ellen Page scandal foregrounds the ways in which the persistent misrepresentation of the motion-capture process reinforces long-standing gender politics issues not only within the industry itself, but also in popular culture and larger fan communities. The widespread belief that star bodies can now be reduced to easily transferrable and transformable digital code enables power structures wherein (predominantly male) game developers are given control over (re)programming the female performer's digital avatar. Shilo T McClean (2007: 61) observes a similar situation in contemporary advertising, wherein 'highly sophisticated digital [female] models' are retouched by their mostly male creators 'to the point where the original human image is not necessarily the greater portion of the final product'. Scott Bukatman (2003: 66) has documented this

phenomenon in the context of the comics industry: 'female desire is absent – when male creators design women characters, they continue to indulge male fantasies. The new power of the female hero is cosmetic surgery.' Timothy Crick (2010: 263) has noted that a game body may exist by itself, but it does not exist for itself. By reducing a woman such as Ellen Page to a game body, current discourse around motion capture invites users to assume that she, too, no longer exists for herself, undermining her autonomy over her image and challenging the notion that the private and the public can remain clearly delineated in this context.

In light of this scandal, it is worth briefly reconsidering *The Congress* and *S1m0ne*, as both films articulate relevant concerns about the gendering of digital labor along familiar patriarchal power structures. In both narratives, the digital turn has created an industrial framework wherein the female performer is, by default, treated as subordinate to male executives. In *S1m0ne*, a male director gets tired of his 'difficult' star and replaces her with a synthespian – a woman literally programmed to obey his every command. *The Congress* sees a team of men take control over a digitized avatar of Robin Wright, ostensibly to salvage her failed career, the blame for which is placed repeatedly – and exclusively – onto her 'lousy choices'. 'I can save you from yourself', a studio executive informs her, in the best tradition of chivalrous oppression. What these narratives reveal is that, as novel and exciting as the creative possibilities opened up by digital technologies may be, they continue to be shaped by sexism and capitalist exploitation. Consider this: in 2001, Dr Aki Ross, the animated protagonist of the film *Final Fantasy: The Spirits Within* 'posed' in a purple bikini for *Maxim* magazine's 'Top 100 Hottest Women' list. All that was required was the permission of Ross's creators (two men), who repeatedly described themselves as Aki Ross's controllers[7] and joked about her obedience, particularly in comparison to human stars (Aldred, 2011: 2). Motion capture enables male fantasies of female disenfranchisement, updated for the 21st century: the recoding of the woman into a replaceable, fully customizable set of data points with no contractual rights or benefits and no way of withholding consent.

For further proof that the current uses of motion capture are entangled with Hollywood gender politics, one need only consider the ways in which the same technology that takes power away from the female performer is often placed in service of the male one. Both within the narratives of motion-capture films, and in real life, motion capture inspires and facilitates male self-improvement and self-actualization. For instance, regardless of Neytiri's portrayal as a capable warrior, her main role is to assist Jake's rise to leadership of her native community which he has infiltrated with the help of computer technologies. Through Jake's 'utopian passage' into his new body, the film's narrative mirrors its production process, implicitly portraying Sam Worthington's motion-captured performance as an equally transcendent act (Cubitt, 2012: 232). In both cases, digital technology is understood as a tool meant to aid the male star in realizing his potential and achieving his goals – which, given the overwhelming heteronormativity of these narratives, typically include a sexual union with the glamorous female.

Lisa Purse (2013: 120) has indicated a continuity between representations of the heroic male in classical Hollywood westerns and historical epics and contemporary digital cinema, pointing to the centrality of the 'display of the male hero's body – poised for action, or defiant in defeat'. In many motion-capture features, female stars are hypersexualized and stripped of agency, whereas their male colleagues' digital bodies function as icons of powerful masculinity. Consider *Beowulf* for the sake of comparison. Unlike Grendel's mother, the titular character does not resemble his human referent at all. Beowulf is a conventionally attractive beefcake hero, while Ray Winstone is a middle-aged, average-looking actor. On one hand, this is a reflection of Hollywood's narrow beauty norms. On the other hand, the extreme lack of physical resemblance also means that, when Beowulf fights Grendel naked, this is not an implied invitation to derive voyeuristic pleasure from looking at the actor's body. Moreover, Beowulf's body may be appealing, but it is not treated simply as an

exotic ornament. In the naked fight scene, his genitalia remain carefully obstructed throughout. When the camera lingers on his body, it is to show the hero's physical prowess and agility. Beowulf's nakedness does not define him; being able to fight so well while nude is simply another sign of his hypermasculinity. If he is remarkable, it is despite his nakedness, not because of it.

Finally, the gender of the motion-capture performers largely determines the nature and tone of public conversation about their experiences with the technology. Compare, for example, statements by Angelina Jolie and Ray Winstone about seeing their digital doubles on screen for the first time. While Jolie publicly admitted to being 'shy' about her nudity (whether genuinely or as a publicity stunt), Winstone expressed only satisfaction: 'the great thing about [motion capture] is it allows someone like me, who's 5ft 10in, a little on the plump side and fifty years old, to play a 6ft 6in, 20-year-old golden-haired Viking' (Hiscock, 2007). The female digital body is reduced to an object of (uncomfortable) scrutiny, while the male one is celebrated as a means of increasing acting versatility and opening up new opportunities for the actor. Motion capture allows Winstone to not be defined by his body, but it causes Jolie to be defined by hers even more. Video game industry discourse reveals a similar imbalance in gender power dynamics. While Ellen Page was forced to contend with the unwanted examination of her avatar's physique on Reddit.com, Kevin Spacey was invited to compare the powerful character he portrays in *Call of Duty* to the powerful character he portrays in *House of Cards* (the former is 'more Machiavellian, bigger') in a *New York Times* profile (Suellentrop, 2014). In the same article, Sigourney Weaver's recent involvement with video game performance capture is acknowledged with a brief note stating that the actress 'reprised her role as Ellen Ripley in a *small part* in *Alien: Isolation*' (emphasis added). The profile then concludes with a quote by Weaver, who describes the appeal of playing the latest *Call of Duty* as follows: 'You get to say: "I worked with Kevin Spacey. We were on *Call of Duty* together"' (Suellentrop, 2014). Here, the female star's experience with performance capture is only relevant to the text insofar as it establishes her as possessing the appropriate credentials to comment on and further reinforce the value of her male colleague's participation in the game.

Such gender-determined inequality may be facilitated by motion capture and the accompanying discourse, but it is by no means limited to that particular niche of the entertainment industry. Indeed, the treatment of female stars in these films is symptomatic of the persistent devaluation of women and female labor in visual effects, animation, and gaming. Digital animation continues to be a male-dominated field. In 2015, only 21 percent of artists, writers, and technicians employed under an Animation Guild contract were women (Kang, 2015). Here, too, truly collaborative labor – in the sense of a partnership of equals – remains unattainable. Even if they succeed at landing a job, women are often denied creative opportunities and relegated to more technical tasks. Marge Dean, co-president of Women in Animation, explains that women in the industry 'end up being PAs [production assistants] or on the production management track, the housekeepers and the organizers as opposed to the creators'. Evidently, the specter of the Ink and Paint department – and the corresponding mentality – has followed animation into the new century. The field of visual effects is in a similar state. In an opinion piece on the gender imbalance and discrimination in the industry, visual effects artists Sonya Teich and Raqi Syed (2015) write the following regarding their personal experiences:

> The fact remains that this is an industry in which an artist can work for 10 years, hopping from one studio to another, and never once encounter a woman in a top level technical position. This and the abysmally low percentage of women in all technical roles, speak to the deeper bias that is reflected in the wider tech industry.

The limited work opportunities and the persistent gendering of more technical or menial tasks as female fit within a larger framework of digitally-enabled misogyny aimed at women who work in these traditionally male-dominated industries. As the Ellen Page scandal has demonstrated, the

anonymity and ease of access afforded by the internet have created a platform where any poten-tially damaging material (be it verbal or visual) can be disseminated instantaneously, widely, and with impunity. The allure of safe transgression represented by motion capture finds its significantly more malicious counterpart in social media's recent use by self-appointed online men's rights cru-saders aiming to put several women in the gaming industry in their place via increasingly violent threats and sustained abuse. Chief among them is the #GamerGate online movement, ostensibly dedicated to preserving integrity in game journalism, but mostly occupied with harassing women like game developer Zoë Quinn, whose former boyfriend publicly accused her of trading sex for favorable reviews, sparking an unprecedented wave of internet abuse (Kain, 2014). #GamerGate has also targeted critic Anita Sarkeesian for uploading feminist analysis of contemporary games' treatment of female characters to YouTube. Since then, she has had to endure bomb threats, death threats, and various other forms of abuse. A number of other female game developers and critics have been 'threatened, harassed, bullied, doxxed and otherwise put through hell' by hostile men in the past year (Ryan, 2014).

Much has already been written about the gender politics and online terror tactics of #GamerGate, and commenting on them further is beyond the scope of this article. However, this misogynistic online movement is relevant to the current discussion in that it demonstrates the larger social impli-cations of the continued devaluation of female labor, disenfranchisement of women, and endorse-ment of gender-based stereotypes and gender inequality in the entertainment industry. That digital space is hostile and treacherous to navigate as a woman is not simply a theoretical argument, nor is it confined to film and gaming; it is – increasingly, frighteningly – an everyday reality.

Conclusion

Motion capture, with its simultaneous dependence on actors' performances and animators' craft, and its visual embodiment of the fusion of their labor via the resulting hybrid creatures, seems like a utopian dream of collaborative symbiosis. In reality, however, it has become a terrain for power negotiations. On the level of theoretical discourse, it represents contested territory sitting at the boundary between live action and animation. At a time when – to echo an oft-cited sentiment offered by Alan Cholodenko (1991) and later popularized by Lev Manovich (2001) – these two modes of filmmaking are supposed to be merging together, each is struggling to redefine its unique-ness, and hybrid production processes like motion and performance capture offer important ideo-logical, aesthetic, and political battle grounds. On the level of industrial politics, motion capture poses both a threat to the rules of classical cinema (not to mention its implied challenge of the defi-nition of what cinema is) and an opportunity for Hollywood to reaffirm its production practices, codes, and aesthetic traditions while dressing them up in the glamorous coating of the digital and passing them off as genuine evolution. In terms of gender dynamics, it offers the promise of liberat-ing the female body from the male gaze via nonphotographic representation, while also holding the key to even greater objectification and devaluation of women. So far, motion capture's potential for genuine change and progress has been successfully suppressed and subverted through erasure of the types of labor whose visibility would challenge the status quo and overemphasis on the contri-butions which uphold it. Ultimately, this is not about simple dualistic oppositions such as actor versus animator or male versus female, but about an entire system struggling to remain relevant by means of collaboration without representation – the perpetuation of pre-digital labor infractions in the realm of digital labor.

Hannah Frank, Paul Flaig, and Lien Fan Shen, for their helpful comments. Many thanks to Lisa Bode for the feedback and suggestions.

Notes

1. For a recent study of the historical continuities between motion capture and prosthetic makeup effects, see Bode (2015).
2. Digital makeup does exist: visual effects artists often remove tattoos, smooth out wrinkles, and otherwise cosmetically alter actors' appearance in post-production. However, this type of invisible visual effect is not what is being invoked here.
3. For a detailed account of the politics of virtual labor and hybrid acting performance, see Stahl (2011).
4. The contributions of the male models remained likewise unacknowledged, but, given the emphasis on the princess character in all of these films, the erasure of the female performers from public discourse remains more noteworthy.
5. Kristen Whissel (2014: 107) has noted that, in keeping with a visual tradition going back to beast and fantastical figures used in emblem books, contemporary digital creatures' bodily designs externalize 'excessive internal impulses' and moral states (such as lust) via animalistic appendages.
6. Indeed, this notion has historically bolstered the prominent role that the male gaze has played in cinema.
7. However, it is important to note – as Mary Desjardins (2015: 18) has – that, while 'workers at the high end of the labor hierarchy', such as Dr Aki Ross's creators, receive recognition in specialized magazines, media discourse rarely 'position[s] typical FX laborers in places of control'.

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Slapstick after Fordism: *WALL-E*, Automatism and Pixar's Fun Factory

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Abstract

In its history, production, plots and gestures, slapstick comedy was tied to the rise of modern labor in terms of both Taylorist theory and Fordist practice. Comic heroes ranging from live action comedians Chaplin or Keaton to animated animals Felix or Mickey worked against work through the playful excesses of their obediences and transgressions within an increasingly rationalized, industrial world. The digital animation studio Pixar summoned slapstick and its specifically Fordist resonances in its 2008 feature, *WALL-E*, yet offered a twist in humanizing a figure of perfected Fordism itself with its title character, a robot repetitively working in a post-apocalyptic earth devoid of human life. Explicitly modeled after Chaplin, Keaton and Lloyd, WALL-E contrasts with the film's humans, who are entirely liberated from labor through automation in a satirical reflection of both post-Fordist accounts of the 'end of work' as well as broader critiques of a distracting digital culture. This article focuses on the film's revitalization of slapstick traditions within the context of recent debates about post-Fordism, the future of automated labor and the transformation of working human bodies. Just as slapstick's relationship to modern labor touched on the playful mode of its cinematic production as well as their form as indexical montage so too does Pixar's corporate reputation as 'Creativity, Inc' suggest a complex relationship between its slapstick hero and the digital labor animating his movement. The same will be argued of Pixar's vaunted techniques with both digital image-making and commodity generation, both of which suggest a nostalgic animation of slapstick's antinomies as much as a disavowal of the post-Fordist production of which Pixar is vanguard.

Keywords

automatism, comedy, digital, Fordism, indexical, labour, Pixar, post-Fordism, slapstick

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In his recent *The World Beyond Your Head*, Matthew Crawford (2015) argues for a reclaiming of the real against the solipsism of contemporary, technologically cocooned life. Opposing digitally induced distraction, he insists on confronting the contingencies of an obstinately material, non-human world, one that rudely insists beyond our representational schema and cognitive certainties. In this, Crawford joins an increasingly vocal chorus of critics questioning the ongoing transformation of human subjectivity via digital mediation and online connectivity (see Turkle, 2012; and Carr, 2011). Yet, to mount this critique, Crawford turns to a surprising example: *Mickey Mouse Clubhouse*, the Disney Channel's first entirely computer animated television series, running from 2006 to the present.

Given the proclaimed philosophical stakes of his book, which draws on Heidegger's concept of 'Being-in-the-World' and critiques Kantian *Aufklärung*, what piques Crawford's interest in *Mickey Mouse Clubhouse*, aimed at teaching pre-schoolers rudimentary concepts, facts and vocabulary? Specifically, it is the contrast between *Clubhouse* and Mickey's first adventures in Disney shorts of the 20s and 30s. In the latter, 'the most prominent source of hilarity is the capacity of material stuff to generate frustration', thus offering to its viewers 'a rich phenomenology of what it is like to be an embodied agent in a world of artifacts and inexorable physical laws' (p. 70). Crawford emphasizes the importance of a specifically slapstick comedy as a unique reflection of the contumacy offered up by objects, bodies and worlds. Crawford also points to the 'real physical grace' of a cartoon character's equally funny avoidance of disaster, his example the consternated yet triumphant Donald Duck (p. 254). Donald appears, along with the usual cast of Disney animals, in *Mickey Mouse Clubhouse*, but for Crawford these characters inhabit a world stripped of contingency and thus comedy, Disney's former slapstick-infused 'phenomenology' drained of all reality. He focuses on the show's emblematic figure of post-modern labor: Toodles, a flying, self-propelling and silent device shaped like Mickey's iconic head and functioning as a cross between iPad and remote control, the perfectly proportional circles of ears and face forming a touch-screen at once anthropomorphic and user-friendly. Displaying on its screen four different 'Mouseke-tools' for each episode, Toodles magically summons these items for the show's characters, allowing the latter to solve a corresponding set of four problems that structure each episode's pedagogical arc. Contrasting analog cartoon with Disney Channel, there is an implicit prescription underlying this critique: returning to slapstick's fraught yet rewarding comedy could offer a way of resisting digital distraction, bringing humans back to the artisanal craft and barter economy Crawford seeks as alternatives to capitalism's seamless, friction-free realities.

In this article, I will explore another instance of slapstick nostalgia, turning like Crawford to a digitally animated work released by the Walt Disney Corporation: Andrew Stanton's 2008 feature film, *WALL-E*. Yet in contrast to *Mickey Mouse Clubhouse*, *WALL-E* seems to fulfill Crawford's longing for a return to slapstick as a remedy for virtual disembodiment. In the dystopian future of Stanton's film, produced by Pixar, human beings have so removed themselves from the world that that world itself has been destroyed, laid waste by endless trash. What remains merely phenomenological in Crawford's account becomes literal in *WALL-E*, as humans depart the planet for outer space, leaving their former home to be cleaned up by trash-compacting robots. Understood by its makers as well as many of its critics as a speculative satire of what Crawford calls, in the subtitle of his book, 'the age of distraction', *WALL-E* provides a glimpse into the future of the Disney Channel's audience, especially if they are conditioned to expect a Toodles at every turn in their future lives at work or play. Stanton and his team infuse their eponymous protagonist – the last surviving trash-compactor – with the very human condition foregone by humans, who have turned into gigantic babies incapable of action or thought. WALL-E is an avatar of slapstick's uniquely materialist phenomenology, one which he offers to the film's infantilized humans as well as to the off-screen at risk: those watching the film in cinemas, on television or as one of a plethora of options on their own Toodles-esque screens.

Between distraction and disclosure, cognitive capitalism and manual craft, unfunny Toodles and hilarious WALL-E there lies, however, a displaced epoch and ideology: Fordism, the model of work geared around mass production, rationalized division of labor and conjoined use/output of industrial machines, ranging from assembly line to automobile to studio-made film. As a reaction formation to the industrialization of work and leisure in the first half of the 20th century, slapstick is a rather curious genre to turn to as a means of bringing contemporary audiences to a pre-industrial world of artisanal skill, celebrated by Crawford and presaged in *WALL-E*'s happy ending of humans returning to farm the earth. In its explosive gags of chaotic machines and unruly bodies, self-sabotaging plots and uniquely filmic form, slapstick is best understood as part of a comic dialectic at once critical of and complicit in Fordism. Although *WALL-E* summons slapstick, it offers a twist: it humanizes a figure of perfected Fordism itself with its title character. Inspired by the examples of Chaplin, Keaton and Lloyd, WALL-E contrasts with both the film's de-evolved humans as well as Disney's other icon of automation, Toodles, acting as a satirical reflection of contemporary post-Fordist anxieties of what Jeremy Rifkin (1995) has called the 'end of work' (see also Carr, 2014; Ford, 2015).

Yet in reaching towards slapstick, *WALL-E* reveals a post-Fordist nostalgia for the divisions implicit to Fordism. These were paradoxically revealed by the tramps, deadpans and creatures at the center of shorts and features by Keystone, Roach, Chaplin, Arbuckle, Keaton, and Lloyd not to mention numerous cartoon shorts by Disney, the Fleischers and Warner Brothers, who carried on the comic tradition into the sound era, these cartoons acting, in Pascal Bonitzer's words, as a 'substitute for lost slapstick' (quoted in Žižek, 1992: 1). If Crawford is right to detect in slapstick a means of revealing the frustrating yet transformative stuff of the world, such disclosure can only be understood against the Fordist background central to the genre's formation. Yet this post-Fordist detection has as its own background a sense of work's growing transformation into the immaterial, cognitive and affective modes Crawford elsewhere locates in contemporary capitalism's management structures, self-help psychologies and corporate exempla in Silicon Valley (pp. 72–73), of which Pixar is representative. Slapstick would offer the resources to bring work back to bodies and things, but the crucial mediator of Fordism would have to vanish, slapstick's dialectic disavowed for a naïve celebration of pre-industrialist phenomenology deprived of the very motor driving its characters' comic negotiations with self and world. Such pre-industrialism is only visibly desirable against the mechanically inflicted loss initiated by Fordism, a stark division between factory time and leisure time, machine and human that slapstick ceaselessly short-circuited. With Fordism's own increasing obsolescence, this very division is mourned for, but crucial agents of factory and machine are forgotten for what Crawford has elsewhere called a 'soulcraft' at once artisanal and affective, a non-synchronous merging of the pre-industrial and the post-Fordist articulated through a slapstick shorn of its material basis and historical reality (Crawford, 2010).

In what follows, I will focus on *WALL-E*'s revitalization of slapstick within the context of recent debates about the eclipse of Fordism, the future of automated labor and the transformation of working human bodies. I will begin by locating the film's manifold citations of slapstick against the historical and formal dialectic between the genre and Fordism. I will then connect this dialectic to the question of cinematic realism and its various indices and automatisms in *WALL-E*, paying particular attention to the film's finale. Finally, I will turn to the film's conditions and means of production, contextualizing *WALL-E*'s turn to slapstick against the post-Fordist cinema of which Pixar is vanguard. If we are to understand how work on screen and off changes in an age of digital distraction, Pixar – in its products, production and philosophy of labor – offers the best starting point, representing a manifold turn from Hollywood's film factory to Silicon Valley, especially when this turn is, as in the case of *WALL-E*, programmatically disavowed.

Automation and comedy

Just as it is a mistake to recall slapstick free of the industrialism that provided much of its motivation, so too should one avoid understanding the genre's relationship to industrialism as a one-way street, a simple subversion of Fordist rationalization and Taylorist efficiency evoked by the iconic example of Charlie Chaplin's assembly line consumption in *Modern Times* (Chaplin, 1936). Beyond this familiar image, however, is a range of links between slapstick and Fordism less obviously oppositional. Whether it is the comic performer's neurasthenic or grotesque bodily excesses or the fraught yet often productive link between gag and plot, slapstick has been understood as a genre less immediately opposed to rationalization and more in a playful, dialectical tension (Gunning, 1994; King, 2009; Krämer, 1989). Such contradiction, often unresolved, can be found in slapstick's potential receptions among mass, global audiences, where its transgression might satirize Fordism as much as reinforce it. Indeed, in Adorno and Horkheimer's *The Dialectic of Enlightenment* (2002[1944]: 110) it is none other than Crawford's example of Donald Duck that transforms the nonsense of slapstick into sado-masochistic incitement for audiences to enjoy, in leisure time, the suffering they endure in factories. Perhaps the most important element of slapstick's relation with Fordism lay in what Walter Benjamin (2008[1935–1936]: 340) called 'the dialectical structure of film', whereby 'the assembly line … is in a sense represented by the filmstrip in the process of consumption'. According to Benjamin, figures like the Tramp or Mickey Mouse satirized Fordism through the application of this 'structure' to their jittery, divisible bodies. We might say that slapstick would apply what Lee Grieveson (2012: 32) has called 'the Fordism of filmic time and space' to bodies, things and the world more generally, suggesting at once an extension of rationalization into the realm of consumption as well as Fordism's possible or simultaneous reflection, sublimation, or satire.

Animation is central to the dynamic between slapstick and Fordism as I have sketched it. Aside from the important links between slapstick and both popular and avant-garde animations in the 20s and 30s, American comic cartoons have been understood as extending slapstick's humor as well as the negotiation of cinema's 'dialectical structure'. This understanding stretches from canonical reflections by Benjamin (2008[1935–1936]: 338–339), Kracauer (2000[1941]) and Eisenstein (1988) to scholarship by Esther Leslie (2004), Miriam Hansen (2011: 163–182), Donald Crafton (2012), Scott Bukatman (2012: 106–134), Paul Wells (2011), Nic Sammond (2015: 87–134) and many others. Recalling and transforming this legacy, Pixar has shown a similarly complex engagement with the interrelations between anarchic comedy, animation and labor both on screen and off (see Halberstam, 2011: 27–52; Stacey and Suchman, 2012). Indeed, many of its feature films in the 1990s and 2000s focus their narratives around work, while showing a related interest in nostalgia for antiquated, anachronistic and analog media genres and forms. Although it fits within this broader trajectory, *WALL-E* is constructed in the specific terms of slapstick and its uniquely filmic refraction of Fordism.

WALL-E is divided, like nearly every Pixar film, into a neat three-act structure. In a first and largely dialogue-free act, WALL-E is introduced as the last robot on earth, left by human beings to clear out a flood of trash produced by a consumerist apocalypse, governments having being replaced by the 'global CEO' of a Walmart-like corporation, Buy N Large (BnL). Left to his own devices, WALL-E performs this job for 700 years, developing his own modest personality through an interest in humanity's past, represented by ancient curios he collects during his working day and enjoys after hours in a makeshift home. Having learned the gestures of courtship by re-watching a VHS copy of the film, *Hello Dolly* (Kelly, 1969), he longs above all to love, with this wish given reality through the arrival of EVE, or, Extraterrestrial Vegetation Evaluator, a sleek, feminine robot, who arrives on earth seeking signs of life. A second act begins after EVE discovers that WALL-E has found a small

plant, which he has deposited in a boot and which EVE collects, her 'directive' fulfilled so as to initi-ate a pre-programmed sequence of events, which WALL-E will, in turn, both aid and disrupt. A spaceship arrives to take EVE and a love-sick WALL-E back to the Axiom, a fully automated deep space luxury liner where humans have gone on a pleasure cruise from history. Humans have forgot-ten not only the earth, but their bodies as well as the immediate world around them, all of which are replaced by a full service 'economy' of ubiquitous and ever-the-same videos, games, fashions and foods created by BnL and supplied by pliant robots. After discovering a conspiracy between BnL's long dead CEO and the Axiom's auto-pilot, Auto, to keep humans from ever returning to earth – assumed beyond repair – WALL-E and EVE rescue their vegetative evidence of terrestrial life, leading the Axiom, through both narrative sequence and their own affectionate example, back to earth and the humans back to love, work and their own humanity.

Andrew Stanton has admitted a range of slapstick influences on not only its title character – an acronym for Waste Allocation Load Lifter Earth class – but on the film's entire look and feel as what he has called, on the film's DVD commentary track, a 'pantomime' film. Especially inter-ested in how to tell the story of characters whose spoken vocabulary is programmatically limited, he and his collaborators watched numerous Chaplin, Lloyd and Keaton films, interested in both comic gestures and gags as well as how to guide both the audience's understanding of plot and empathy for its robots-in-love with minimal verbal exposition. *Modern Times* was an especially important resource, being at once a deliberately anachronistic sound film featuring a speechless central couple as well as, in Stanton's words, 'an indirect comment on one possibility of the auto-mation of humanity and losing your soul' (Sragow, 2008). The crucial difference between Stanton's film and Chaplin's *Modern Times*, or between Keaton's deadpan and the Keaton-influenced mel-ancholy of WALL-E's face, is that Pixar's film inverts slapstick's underlying humanism by offer-ing a robotic protagonist more human than humans themselves.

If Chaplin, Keaton and Lloyd's films mechanically encrust bodies, things and spaces while still finding implicitly human resolution through heterosexual union, WALL-E would seem to both reverse and extend this logic. Henri Bergson's (1911[1900]) text, *Laughter*, a necessary if neces-sarily contestable starting point for the slapstick scholar, insisted on comedy's interweaving of the human and the machine. Bergson argues as a first premise that 'the comic does not exist outside the pale of what is strictly HUMAN' but also claims that this same comedy appears only through the laughable appearance of a mechanical inhumanity: 'Our starting-point is … "something mechani-cal encrusted upon the living." Where did the comic come from in this case? It came from the fact that the living body became rigid, like a machine' (pp. 3, 49). *WALL-E* would seem at once to chal-lenge and confirm Bergson's theory, since it extends humanity to a robot, one interested, like the philosopher before him, in the relationship between matter and memory. Bergson's dichotomous terms are here retained but the movement between them has reversed: what is funny about WALL-E is not his mechanism, but rather his vitality, an animation of the inanimate explicitly modeled on the Pixar ur-form and corporate icon of lamp Luxo Jr, a modeling we have already seen in the case of Toodles and Mickey Mouse.

This intersection of liveliness and encrustation has as its basis industrial mechanism and cor-poreal maladjustment, the robot's vitality expressing itself against a machine-body based on a Fordist model of labor, the epitome of mechanical regimentation and thus, for the comedian, asking for interruption and exaggeration. Although his legs would seem to recall the treads of a tank, they also echo the perpetual motion of the assembly line and its conveyor belt. WALL-E suggests a version of the assembly line gone mobile, an itinerant factory whose product is reverse engineered trash, once shiny commodities turned into decaying waste turned into products of clearance aggregating into the common slapstick setting of skyscraper. As this image suggests, WALL-E is funny, in part, because his trash compacting is made to resemble not work, but the

Figure 1. In *WALL-E* (Andrew Stanton, 2008), the title character 'takes a dump' at and as work, his treads evoking a mobile assembly line, his binoculared eyes Buster Keaton's deadpan gaze, and his gritty, out-of-focus environment the techniques and forms of analog cinematography. Screen Grab from Walt Disney Studios Home Entertainment DVD, 2008.

at once literal and biological performance of 'taking a dump', his intense concentration adding to this comedy of constipated labor (Figure 1). Rather than becoming the de-humanized cog fed down the assembly line, WALL-E is an assembly line that self-humanizes. With his combination of automated directive and evolved personality WALL-E suggests a synthesis of Chaplin's earthy Tramp, Keaton's robotic deadpan and Lloyd's sentimental go-getter. Yet he is also a historical progression of slapstick's mechanical encrustations, one rooted in the time- and energy-saving philosophies and devices of Fordism and Taylorism, which included the automated eye of the cinema itself.

As a highly empathetic figure of isolation, repetitive work and human-aping desire, WALL-E recalls a statement by Jacques Attali (1991: 101):

> Machines are the new proletariat. The working class is being given its walking papers. Nomadic man is taught that if he is to find work more easily, he must not count too much on society to keep him in shape. He must regard himself as his own.

Attali's distinction between the proletarianization of automated machines and the creative yet precarious work of 'nomadic man' anticipates discussions of contemporary labor by Maurizio Lazzarato (2006), Luc Boltanski and Eve Chiapello (2007), Michael Hardt and Antonio Negri (2001), Franco 'Bifo' Berardi (2009) and others. The repeated gestures, comic spasms and de-humanization associated with Fordism would be transferred to machines while human beings would either develop into a new leisure class of 1 percent idlers or be otherwise left to sculpt their own lives into 24/7 jobs, which employ them anywhere and everywhere without the stable ground provided by a welfare state or traditional modes of identification within nation, class or ethnicity. All these scholars insist that immaterial labour is necessarily creative and aesthetic, more cognitive or affective than rotely physical and thus a kind of work lacking Fordism's firm distinctions of time, space and identity. Such distinctions were given their bluntest statement in Henry Ford's *My Life and Work* (1923: 92):

> When we are at work we ought to be at work. When we are at play we ought to be at play. There is no use trying to mix the two. The sole object ought to be to get the work done and to get paid for it. When the work is done, then the play can come, but not before.

In endowing WALL-E with sentience, curiosity and desire, Stanton and his Pixar collaborators would seem to be mourning the loss of Fordism itself and with it the dialectical interplay slapstick was thought to articulate against and within the mechanizations celebrated by industrialists like Ford and feared by philosophers like Bergson. Yet if the Tramp or the many other lumpen-proletarian figures dominating slapstick harkened back to pre-industrial forms of idleness or eccentric tinkering, WALL-E's relationship to his work, his constant halting of the assembly line dissimulates the specific creativity now demanded of workforces. Like the Japanese model of lean production thought to initiate post-Fordism (see Hardt, 1999: 93), WALL-E's work is based on stopping and starting as he goes but, through the very act of stopping, the nature and end of what he does changes: clearing out waste is done only for the sake of finding items that whet his curiosity or desire, all given further creative motivation by his chosen soundtrack, *Hello Dolly*'s 'Put on Your Sunday Clothes'. Although WALL-E would seem to live the structured time of the factory worker – we get a sense of a day's labor when he compacts and stacks trash all day and then returns to his home for re-charging leisure – his tedious work is barely shown. The creativity and ingenuity of the slapstick protagonist, suffused with its own nostalgia for life and work prior to the modern, metropolitan or industrial, are here seen under the sign of the post-industrial, mechanical tinkering and urban *flaneurie* retroactively projected as antecedents of post-Fordist sculpting. WALL-E's real work is the curiosity he brings as a rag picker of human histories and of historicity itself, the possibility that things may be otherwise, which human beings have forgotten and which robots either learn, as in the case of EVE, or refuse, as in the case of the tellingly named Auto.

While Auto is explicitly connected to *2001: A Space Odyssey*'s (Kubrick, 1968) HAL, his iconography as red-eyed ship's wheel was inspired by another inter-text: Rudyard Kipling's 1897 novel, *Captain Courageous*. Kipling's novel, contemporary to the 1890s that the film elsewhere recalls via *Hello Dolly*, concerns the transformation of a spoiled son of an industrial magnate after being forced to work on a fishing boat. The Axiom's ship's wheel is a strange combination of old and new, the spaceship's sole concession to manual labor yet, in name, function and cinematic reference, the very essence of automation. More importantly, Kipling's novel suggests a crucial mythological antecedent for WALL-E: the proletarians are celebrated not for their work but rather for their life force, as a kind of *elan vital* upon which the wealthy leach. As Slavoj Žižek (2008: 58) argues of Kipling's story, 'beneath this sympathy for the poor, there is another narrative, the profoundly reactionary myth … of a young rich kid in crisis whose vitality is restored by a brief intimate contact with the full-blooded life of the poor.' On the one hand, WALL-E is a proletarian in the 19th-century sense that Attali implies, with a division between the time and space of the factory which, in the film, has become the world and the leisure space of a home that is part bunker and part Noah's ark. What humans require from him is precisely the comic vitality produced by a self-evolved desire against regimentation. As opposed to Bergson's diametrical opposition between vitality and mechanism, the history-making power of WALL-E's desire for life is itself desired only because of its resistance to the automations of his own body as well as those on board the Axiom. This setting, along with WALL-E's romancing EVE, cannot help but recall Žižek's own filmic example of this 'myth': James Cameron's *Titanic* (1997).

The appeal of this image of proletarian vitality bursting from the encrustations of the factory is, however, framed by the film's implicitly post-Fordist referent. WALL-E is less anarchic tramp or Dadaist mechanic than he is a creative laborer in the mode of the precarious, self-sculpting and flexible 'knowledge-worker'. He is an ambiguous wish-image, a nostalgic reserve of proletarian slapstick energy fighting against Fordism's firm divisions of time and space yet, rather than recalling pre-industrial idleness, instead implies a contemporary landscape in which life and work know

no boundary. What goes missing here is work itself, its tedium, encrustation and above all automation and with this goes the concept of class antagonism implied by the becoming-proletarian of robots or the becoming-precarious of vast swaths of technologically unemployed humanity 'handed their walking papers'. This is literally the case since the vital humanity implied by WALL-E's nominating acronym is based on a disavowal of the 'class' concluding his designation. And there is another meaning of 'class' disavowed: WALL-E's seriality, the fact that he, like EVE or any of the charmingly idiosyncratic robots in the film, is a mass-produced machine. Each robot must remain an individual personality, never confronting the Fordist fact of origin nor the uncanny possibility of being more than one. Like the 'class' taken away so as to give WALL-E both name and gender, here class is missing in the sense not simply of seriality, but in the sense of antagonism, a split in the basic organization of society disavowed precisely in images of the proletarian as life-giving succor. Like the wise, rough and tumble fishermen in Kipling's novel, WALL-E's robot is proletarian not through the work he does, but rather in the vitality he offers up to a leisure class become species-being. That vitality is at once anachronistically rooted in slapstick's playful, creative relationship with work and a refraction of the immaterial modes of production animating *WALL-E* itself.

From automation to automatism

Just as *WALL-E* re-vivifies slapstick through a post-Fordist projection so too does it celebrate an increasingly fading phenomenology of filmic presence through digital re-animation. The two nostalgias, one for slapstick's comedy, the other for its analog base, serve the same ends, an interest in the past likewise seen in Matthew Crawford's evocation of early Disney as bringing viewers in contact with the world beyond their heads. The difference, however, is that *WALL-E*'s imagery might have more in common with *Mickey Mouse Clubhouse* than with any of the industrially organized, hand-drawn cel animation of Disney films in the 20s, 30s and 40s. Vivian Sobchack (2009) and Eric Herhuth (2014) have written on the film's complex negotiation between its digital animation and the various references to the analog contained within its narrative, characters and visual composition. First and foremost, there is the plot point of the plant in the shoe, at once evidence of a habitable planet and an invitation to walk upon earth once more. Among other associations, this image of the boot evokes the canonical example of the indexical in Peircian semiotics often applied to analog photography, that of the footprint. An explicit moment of walking as re-evolution – in which the Axiom's captain, McCrea, rises to his feet to fight Auto and set course back for earth – points to another set of cinematic resources: as McCrea takes his first step, the film's soundtrack cues 'Also sprach Zarathustra', only one reference of many to canonical science fiction cinema. Such homage is not bound to the film's narrative, but is also, as Herhuth argues, matched by a range of techniques used to simulate the gritty, grainy realism of analog cinematography in genre cinemas ranging from science fiction to the musical to aforementioned slapstick. *WALL-E*'s most important endorsement of cinematic nostalgia, however, involves the film's bringing diegetic and non-diegetic spectators alike back in touch with the world around them, giving them a view of the world much in the manner mourned by Crawford in his appeal to Donald Duck.

The claim of a special relationship between slapstick as genre and a certain cinematic realism long precedes Crawford's recent appeal to the genre. In fact, this relationship is foundational to realist film theory. The key figures in that theory's formation – Siegfried Kracauer (2012: 214–215), André Bazin (2009: 83) and Stanley Cavell (1978: 249–250) – all intuited an especial importance to slapstick in affording viewers a kind of presence to the world in all its historical, material recalcitrance. As he inverts the Bergsonian definition of the comic, so too does WALL-E both

confirm and subvert this realist appeal to slapstick. Rather than acting only as witness of the world's materiality, will or distance, WALL-E also acts as indexical real, especially on board the Axiom, when his circulation – leaving filthy tread-prints everywhere he goes – disrupts the automated economy of the ship's robots as well as the visual economy of humans glued to their screens. The opening words of *Hello Dolly*'s 'Put on Your Sunday Clothes' – 'Out there is a world beyond Yonkers' – a musical citation with which *WALL-E* begins, thus serves as an incitement not to depart the planet, which the accompanying images of outer space might otherwise suggest, but of looking beyond one's head or screen. Slapstick's encrustations would be the best means of provoking this look, distracting distraction from its automated directive, pointing gaze and body back to the earth's essential dimensions of materiality, contingency and finitude. As if taking the ontology of film developed by Cavell in *The World Viewed* (1979) literally, *WALL-E* removes human beings from the world through automatism so as to give them the renewed glimpse of it afforded by this absence, one made present by the obtrusive index of earth, WALL-E.

Although automatism is a term that Cavell attributes to media in general – as both material constraint and formal convention – its use was provoked by the specifically automatic nature of photography, which reproduces images of the world without any human-motivated action. Cavell's language emphasizes this process in the Fordist terms of production, writing of film's medium having a 'manufacturing mechanism at its basis' (p. 105). More than Kracauer and Bazin, Cavell's realist approach to slapstick departs from the topic of labor, referencing Heidegger's concept of the 'work-world' as the disrupted basis for slapstick's 'perception or apprehension of the things of our world'. Slapstick would thus not only bring people back to the world, but also back to an awareness of work and the automatic, invisible and material manufacturing often hiding that world in all its disruptive difference.

In *WALL-E*'s case, however, slapstick's realism points not to manufacture but rather to the pre-industrial realms of agrarian and artisanal labor, a glimpse of future utopia the film alludes to in its conclusion. In the film's climax, a broken down WALL-E's personality is threatened by a replacement circuit-board that re-boots him: in a moment of near tragedy, one that echoes the end of *City Lights* (Chaplin, 1931), EVE watches him return to the automated behavior of an anonymous, mass-produced trash compactor, perhaps the film's only genuine image of Fordism's mindless dehumanization. But this tragic moment in which industrial work is seen for what it is quickly dissolves when EVE embraces WALL-E, provoking a spark between the two robots that miraculously recalls the latter's personality to life. Seriality and finitude are alluded to, but quickly disavowed in favor of individual personality that might go on forever. A final shot sweeps from the robots' embrace to an urban wasteland showing the first signs of life in centuries, with Captain McCrea explaining the principles of farming to now-walking humans.

WALL-E gives some image of this new future in a credit sequence animated by Jim Capobianco and set to the song 'Down to Earth', written and performed by Peter Gabriel. This sequence details a future history of a second humanity through first humanity's ages of art. Moving from cave paintings to hieroglyphics to mosaic, the sequence animates these still image genres, giving motion to figure and landscape according to the intertwined histories of art and technology, re-written as a harmonious relationship through the mutually supportive work of humans and robots alike: cave paintings detail the re-discovery of fire through WALL-E's laser, hieroglyphics the digging of wells by EVE, Greek urns the automated planting of seeds and so on. Finally, Da Vinci-esque sketches are painted over by a robot in the watercolors of Monet's impressionism, which shifts from an urban scene to sail boats on a river and finally concludes with two further impressionist pastiches: pointillist children running and fishing with the Axiom looming behind them (after Seurat) and, finally, an image of a bird surrounded by flowers giving way to WALL-E and EVE beneath a tree, looking up at its branches (after Van Gogh). As Gabriel repeats the song's chorus

('We're coming down to the ground …') the frame shifts downward, showing the tree's roots gathering around a central origin: the boot that brought human beings back to earth.

This credit sequence is meant to confirm a happy ending for a re-booted humanity, painted in the familiar colors and familiar story of humanity's first history, culminating in an impressionist utopia. As with the film's appeals to slapstick, there is an ambiguity here since this newly reconstituted future can only be pictured in the terms of the past, as if it were impossible to re-imagine in either aesthetic or historical terms something beyond the already-given, an implicit automation that would sentence history to farcical repetition. Yet this repetition does contain its differences: still images are animated, robots join human beings in both work and play and there is the final destination of pastoral paradise afforded by impressionism. What seems most utopian about these final images is not simply the communion of technology and nature, but rather that we do not see what comes after impressionism in the conjoined terms of aesthetic form and historical content. These include not merely the various modernisms that followed impressionism (the fauvist, futurist, cubist, expressionist, Dadaist, constructivist, surrealist, etc.), but the intrinsic relationship such movements had to the traumas and technologies of the coming century. Of the latter, we would have to include above all the cinema or, anticipating it, the photography fundamental to impressionism's own pre-history. Of the former, we would not only include what Gerry Canavan (2014), writing of this sequence, has called 'the many disasters of the twentieth century', but the tragedy of Fordism in particular, implicitly sublated by the cooperation of robots and humans, working together for a more harmonious relationship to the earth. Despite this final utopia, these 'disasters' are still visible, even in their absence. Staining this final image, WALL-E and EVE are themselves blots of both the Fordist and post-Fordist regimes of labor and, however idyllic their leisure time, they are like *WALL-E* itself, largely constituted by the epochs following impressionism's seeming last glimpse of pastoral beauty and natural idleness prior to the automation of life and leisure otherwise known as cinema. WALL-E is not simply a conjoined figure of both film and factory, but also anticipates the animating relationship between this industrial art and modernism. His body is a kind of cubist-constructivist assemblage and in this he maintains a further aspect of the slapstick legacy: the importance of figures like Chaplin, Keaton and Felix the Cat for a range of inter-war avant-gardes. No longer lost in their heads or automated by directives and deceptions, robots and humans re-connect to their world, tend to its flourishing and thus to their own. Rather than ventriloquizing by technique or genre the cinematic as it had in the preceding 90 minutes of plot and image, here pre-photographic automatisms are summoned, all depending on the exercise of human hand rather than the manufacturing basis of the camera.

Having begun with an evocation of urban, standardized leisure on the cusp of the 20th century in the form (and title) of 'Put On Your Sunday Clothes', the film finds, in its coda, an 'out there' no longer dependent on a cinematic let alone specifically slapstick realism. Cinema's ambiguous dependence on Fordism, at once reliant on the alienating logic of automated manufacture while confronting this alienation in genres like slapstick, would be done with, having served its purpose on board the Axiom. Returning to earth, the film's nostalgia no longer needs the cinematic as a means of comically reconciling with body, mind, or world, instead turning to a pre-Fordist world at once anticipating the 20th century while disavowing the possibility of its apocalyptic repetition.

Pixar's 'fun factory'

What of the digital, those strings pulling *WALL-E* according to a principle of simulation rather than tying it to the physical world through photographic index? Does the film's climactic appeals to personality, perpetuity and union of pre-photographic art and pre-industrial labor contradict its own digital construction, far more removed from reality than cinema's attempts to turn alienating,

Figure 2. During *WALL-E*'s end-credit sequence, animated by Jim Capobianco, one of the Axiom's robots paints a pastoral paradise in the style of Monet over a Renaissance fresco of early modern urban life. Screen Grab from Walt Disney Studios Home Entertainment DVD, 2008.

autonomist photographic footprint into aesthetic utopia? I would suggest rather that the film's appeal to the painterly claims proximity between the digital and the artisanal, both made without the use of photographic automatism. The film's final sequence seems to acknowledge Lev Manovich's oft-cited assimilation of cinema within a broader history of drawn, animated imagery, one recently echoed by Wolfgang Ernst (2013: 47): 'In the present age, the possibilities of digital manipulation of electronic photography seems to be returning images to a prephotographic quality of painting: that characterized by the painterly brushstroke.' It is a robot that wields this magical, era-spanning stroke, transforming Renaissance sketch into impressionist paradise, human civilization into bucolic nature, as if to forego its own status as Fordist assemblage (Figure 2).

This echo of the painterly within the digital is explicitly suggested after Capobianco's sequence ends, as the ground beneath WALL-E and EVE's tree gives way to root, boot and finally the black background of credits: as the list scrolls up, 8-bit versions of the film's characters and figures appear alongside the text, zipping up and down in various comic antics. Leaping from impressionism to charmingly anachronistic digital figures, the film skips over an entire century of art as if to preach to its audiences Manovich's (2001: 302) dictum: 'Manual construction and animation of images gave birth to cinema and slipped into the margins … only to re-appear as the foundation of digital cinema.'

Foremost among the many problems with this statement is the recurrence not simply of the drawn or painterly, but of 'manual construction', a return to individual handicraft and artisanal labor *WALL-E*'s finale is far more explicit about than Manovich. Yet this return happens in the context of a credit sequence that gives direct lie to this return, either in terms of individual rather than collective work, or in terms of 'manual construction' rather than digital compositing. In contrast to painting's signature, Pixar's digital animation is an art of endless credit, of, first, a uniquely post-Fordist division of labor involving numerous departments (Camera & Staging, Animation, Characters, Sets, Lighting, Effects, Rendering & Optimization, etc.) organized beneath a corporate umbrella as well as, second, an essentially immaterial labor having little in common with either manual brushstroke or manufactured cinematography. This is the most obvious of the film's many disavowals of labor and – like the disavowal central to Freudian fetishism – the credit sequence, a historiographic parallax of pre- and post-industrial artistic labor leaping from Van Gogh's peasant boot to Nintendo, tempts its audience to avoid looking directly at the endless list of names and departments that worked for years to achieve its simulated analog effects.

To conclude this analysis of Pixar's film, I would like to turn to Pixar itself, the film's corporate author and thus to what is occluded by the distractions offered up during the film's final

acknowledgment of the labor animating its production. Neither artisanal nor industrial, signed nor manufactured, the labor of those endlessly listed during *WALL-E*'s credits clarifies the film's recourse to slapstick's dialectics as well as the credits' *Aufhebung*, which would imply Pixar's digital nostalgia as a return to the organic and individual. WALL-E and EVE would offer a paradisal synthesis of industrial, digital and artisanal regimes of art and work that Pixar would claim, in its corporate philosophy, campus location and relationship to parent company, Disney, to herald.

Leon Gurevitch (2015) has emphasized *WALL-E*'s complex appeals to slapstick, suggesting an apt re-title: *Postmodern Times*. Gurevitch argues that the film's critique of screen-distracted humans acknowledges a larger transformation of spectatorship underlying the reception of all Pixar films: 'a move beyond a logic of Fordist production in which image and industrial objects have literally become interoperable' (p. 13). For their part, Herhuth and Sobchack have turned to psychoanalytic concepts to account for WALL-E's allegory of intersecting analog and digital image-regimes. Herhuth (2014) discusses the hetero-normative and 'liberal desire' between WALL-E and EVE (pp. 56–61); Sobchack (2009) characterizes the comic trash compactor as transitional object, a comfort-image allaying the anxiety-inducing losses of both the filmic and the industrial (p. 385). Sobchack goes on to suggest that one of the anxieties allayed by WALL-E is the 'invisibility and effortlessness' of 'electronic technologies'. She herself nostalgically longs for the jerky movement of anachronistic, amateur, or avant-garde animations that 'visibly labor'. Implicitly analog, such visibly labored images would contrast with the seamless digital sheen of *WALL-E* (p. 390). What seems invisible here is precisely the immaterial labor saturating *WALL-E's* production and driving its own nostalgic embrace of slapstick-infused idleness free of the image of industry. WALL-E would be a transitional object not merely between analog and digital, human and machine, but between the industrial model of filmmaking and the creative labor of Silicon Valley. If Hollywood was, in Hollis Frampton's (2009: 178) words, 'the Detroit of the image', Pixar is the paragon of a Silicon Valley of the image, the most visible site of a digital transformation of the moving image into animation coupled with a necessary transformation of the labor motivating this animation and authoring the forms and stories by which its work is reflected or repressed.

Here too, slapstick is an essential reference point. In *The Fun Factory: The Keystone Film Company and the Emergence of Mass Culture*, Rob King (2009) argues that the tension between work and play on display in Mack Sennett's Keystone films was also crucial to the image of work that supposedly went into these films. Describing contemporary press coverage, he writes, 'Keystone's mode of production was redefined in terms of its product: the making of slapstick was itself a kind of comedy…' (p. 36). Fashioning its identity as corporate author, companies like Keystone extended the interplay of slapstick and Fordism, of 'fun' and 'factory', to its off-screen base so as to shape the audience's own relationship to its products, as 'a zany counterweight' (p. 34) to both alienating work as well as Sennett's rivals. Sennett's 'fun factory' would later find its inverted image in studios like Disney, where Fordism was acknowledged in terms of both the studio's production practices and in its animated products, which featured utopian images of characters happily working on the assembly line more often than they did Bergsonian battles in the manner of *Modern Times* or René Clair's *À Nous la Liberté* (1931) (see Sammond, 2005: 27–28).

Although Disney purchased Pixar in 2006, the tail seems to be wagging the dog, at least in terms of bringing the former's corporate practice in line with the latter's profitable reliance on post-Fordist principles. In a 2011 article tellingly entitled 'The Fun Factory: Life at Pixar', the *New Yorker*'s Anthony Lane describes the company's northern Californian campus as a utopia, filled with amenities – free breakfast cereal, festive cubicles, secret tiki lounges – all too common among Silicon Valley's most successful firms. In the words of one Pixar employee quoted by Lane, all this 'helps them to do their job and get away from their job'. Lane implies, like those reporters who visited the set of Sennett's Keystone studio, a relationship between the way Pixar functions as

studio and the films it produces: 'The key to Pixar … is that what it seeks to enact, as corporate policy, and what it strives to dramatize, in its art, spring from a common purpose, and a single clarion call: You've got a friend in me.' From Keystone's 'fun factory' to Pixar's, all that is missing is the factory itself and the subtitle of Lane's essay is revealing: it does not emphasize working at Pixar, but rather living, no firm separation between labor and life, corporation and friend, or doing one's job and getting away from that job.

Providing a corporate manifesto for this 'common purpose', Pixar's founder, Ed Catmull, has co-written *Creativity Inc.* (Catmull and Wallace, 2014), selling to other managers Pixar's vision of how to work creatively. A reversal of nearly every premise offered in the founding text of the management guru genre, Ford's *My Life and Work*, Catmull locates Pixar's corporate philosophy of work in the inspiration of the Japanese lean production, which would pride creativity over efficiency and influence firms like Apple and Hewlett Packard. Beyond its location, Pixar's history as a corporation and film studio is embedded in a wave of post-Fordist theory and practice, this not only through the influence of its one-time owner, Steve Jobs, but in the explicit contrast between its model and that of Disney, which had fired John Lasseter for his interest in digital animation and, in an ironic twist, purchased Pixar and installed Lasseter and Catmull as heads of Disney Animation in 2006. *Creativity Inc*. offers up all the watchwords of post-Fordism: beyond the title's evocation of creative rather than regimented labor, there is insistence on the random and stochastic, on confronting and sometimes celebrating failure and on the centrality of affect as the glue binding management to workers and workers to the object of their work, films which themselves operate as highly affective relays between Pixar's brand and its consumers.

As a product of Pixar's fun factory, *WALL-E* offers, as I have suggested, its own image of creative work, seen in nostalgic light of slapstick's idle refusals and transformations. What Herhuth (2014) describes as the liberal, heterosexual desire between WALL-E and EVE is also a neo-liberal, hetero-corporate desire reconciling management philosophies and their corresponding epochs, from out-of-times Disney to new-media Pixar. Yet, consistent with the film's nostalgia, the new is on the side of anachronism, WALL-E's broken-down assembly line overwhelming through love the all-consuming 'directive' of EVE, modeled on Apple's sleekly designed, minimalist consumer electronics devices. This is a pairing of old and new central to the Pixar aesthetic, perhaps most visible in the relationship between Buzz Lightyear and Woody the Cowboy in the *Toy Story* franchise. WALL-E would represent his corporate author as automation's creative continuity from the industrial to the post-industrial, a factory-personality whose citation of the past heralds the future, a move anticipated by IBM's re-animation of Chaplin's Tramp in the early 80s to sell its first personal computer. Like WALL-E, Pixar would be the loving guardian of the past, of slapstick, cinema and historical contingency, while Disney, cold, heartless and resistant to change, seems set on autopilot. Despite this seeming separation, Catmull and Lasseter have agreed to the phasing out of 2D cel animation at Disney, while many of the latter's digitally animated films increasingly reflect Pixar's interest in nostalgic media redemptions, painted in digital colors. Its merger with Disney entailed a merchandise deal with Sam's Club, one of the inspirations for *WALL-E*'s BnL, and owned by a corporation, Walmart, well known for refusing its employees the right to form a union, an industrial model of labor relations Catmull likewise deems anachronistic and inflexible (see Price, 2008: 261–262). This seems all too fitting since the model of 'just-in-time' production developed by Japanese corporations like Toyota was inspired by 'America's giant supermarkets', progenitors of fictional BnL (Rifkin, 1995: 99). The Disney merger also guaranteed, as Catmull admits, more pressure on the company to make sequels from pre-existing properties, primarily because these are much easier to market given their pre-programmed cast of commodified characters. They are also less labor intensive and Catmull himself emphasizes a current drive at Pixar to radically reduce production time on films. Creativity Inc. on auto-pilot.

In contrast to Disney's well-documented, fractious labor history, the utopia of Pixar's fun factory is founded on the avoidance of unionization. Its first partnership with Disney for *Toy Story* was based on a fabricated third-party company that would allow for non-contractual labor (Price, 2008: 133). Catmull insists that creativity is inhibited when employees have long-term contracts, preferring a precarious model that would motivate its workers, who are rewarded by perks of friendly life on Pixar's campus, which one should never want to leave unless of course they are fired. Contingency cuts both ways and not surprisingly only those in management positions can demand such flexibility of its employees. In 2014, Pixar shed 5 percent of its workforce, having difficulty with several new projects while ramping up production on a host of sequels. Pixar's nearly Oedipal relationship to Disney is written into its feature films as allegorical justifications for what Jerome Christensen (2012: 333) has called a 'deeply corporatist vision', one that claims a primacy for its digital mode of production as the authentic, reverential vessel for Disney's brand, all opposed to the industrial mode prized by Walt himself yet stagnating prior to Catmull and Lasseter's dog-wagging takeover.

The future of work represented by Pixar's 'fun factory' and Catmull's *Creativity Inc.* cannot help but recall an altered version of the Axiom: a combination of animation studio and Disney cruise ship where various distractions lead not to lethargy but to an intense, affectively charged devotion for work become life, a philosophy of both management and art where corporation is friend for employees and audiences alike. WALL-E's own workless work, his transformation of automation into creative nostalgia, is a wish-image of Pixar's corporate ethos and not surprisingly the curios stored in his bunker – a Rubics cube, *Pong*, various commodity kitsch – were one of the most labor intensive spaces to animate, as much a sign of personal passion as professional obligation. These are objects anachronistic already in 2008 let alone seven centuries into the future, evincing a contemporary devotion to media never at their newest. WALL-E projected as the very model of a perfect Pixar employee, a corporate self-projection likewise at work in Pixar's recent feature, *Inside Out* (Docter and Del Carmen, 2015), where the labor of affects is anachronistically imagined as a combination of industrial control room, film studio and amusement park.

Conclusions

As a final provocation I would partially second Crawford and Sobchack's longing for visibly labored images but, rather than mourning the loss of the analog or artisanal, one might instead ask how to make the immaterial, creative and often 'unseen' labor underlying digitally animated films like *WALL-E* manifest? Rather than nostalgically seeking slapstick (or the cinematic) as a means of bypassing industrialism for the sake of pre-Fordist communion with body and world, we might instead seek comic forms adequate to post-Fordism. How might Toodles become funny without recourse to slapstick's Bergsonism? And since Fordism and Taylorism have hardly been eclipsed, where might slapstick make the messy intersections of the industrial and post-industrial laughable or thinkable, whether they be globally dispersed, multi-national owned factories or crushingly efficient companies like Amazon? Recalling the iPodesque EVE's ambivalent location between heartless directive and affective spark, how might we make labor satirically visible as it circulates between, say, Foxconn factories in China and Apple's new Axiom-like campus in Cupertino? As initial reply, I would suggest that immaterial labor is hardly invisible in *WALL-E*. The film suggests that a refusal to show work calls attention to such absence all the more symptomatically, whether this be the industrial boredom WALL-E nomadically transforms, the missing century of modernism in its final credit sequence or the ideology and aesthetic of Pixar as corporate friend. Images 'visibly labored' might be most present precisely when they are avoiding industry. In such moments, this might be when their fun factories are working hardest.

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Designing for India: Government Animation Education and the Politics of Identity

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Abstract
This article examines animation education at the two Indian government design schools, the National Institute of Design (NID) and Industrial Design Centre (IDC), looking beyond the transfer of skills to the negotiation of social and professional identity. The accounts of faculty, students and graduates express symbolic values of local relevance and cultural continuity rooted in a tradition of 'purposeful design' as a tool for post-independence national development. Moreover such testimony not only reveals fraught discourses of national, regional, class, and gender identity, but also creative independence and entrepreneurship. By placing design instruction in a context of communities of practice, the author argues that this reflects an overt politicised effort on the part of educators and students to respond to the current industrial conditions of Indian animation, rejecting market-driven labour standardization in favour of ideologically-based professional networks of their own devising.

Introduction

The sustainability of any organizational structure in the cultural industries is contingent on learning. This includes such diverse activities as how individuals and groups of practitioners begin to develop the technical and creative capabilities needed to compete in the global market for outsourcing contracts, as well as the experimentation in short-form storytelling that spurs the growth of boutique studios. The animation industry is no exception. Just as practitioners learn to create sophisticated animation content, they also acquire the skills to participate in and contribute to a culture of production, including all the varied cultural expressions, social arrangements, and

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symbolic practices that communities use to generate identity, negotiate consensus and reproduce themselves (Caldwell, 2008: 2). They learn how to engage in reflexive practice and to theorize about their experience in nuanced and challenging ways.

This educational reflexivity also conceals a practical imperative. Among the most critical concerns for any industrial sector is the need to attract and develop a new generation of workers (Grugulis and Stoyanova, 2009: 135). Not only must a system of learning transfer requisite skills, but it also involves a process of socialization whereby students develop the norms, cultural competencies and attitudes needed to access further knowledge and work in an evolving production environment. Just as the conditions of production undergo continuous transformation, so too do the schools that the community designates and holds accountable for instruction. As animation work becomes increasingly project-focused, many of the traditional mechanisms for skills acquisition and socialization in the workplace begin to break down (Grugulis and Stoyanova, 2011: 343). Nonetheless, the fundamental demand for skilled creative workers continues, and places increasing pressure on educational institutions to fill the gap. In the case of animation in India, much of this falls upon two government-run schools: The National Institute of Design (NID) in Ahmedabad and the Industrial Design Centre (IDC) at the Indian Institute of Technology Bombay (IITB) in Mumbai.

In this article, I consider how socialization occurs in Indian animation design education. I reveal how the students, faculty and alumni understand social and creative practice within the institutes as fundamental not only to the development of their individual identities, but also the interpersonal networks through which they navigate their professional lives. Design institutes have the potential to be crucial spaces for observing initial identity formation and the parallel conception of negotiated communities. As Lisa Henderson (1990: 12) puts it, 'while the cultivation of professional repertoires does not end with school, schools are increasingly where people first encounter those repertoires in a variety of professional fields.' Modes of belonging practised in these settings persist in other aspects of professional life, both in the commercial settings of animation studios and the community spaces of professional and industrial associations.

The process of identity formation that accompanies design education is unusual in three senses. The first is its political context: the NID and IDC integrate animation instruction in a wider curriculum of 'purposeful' design, embedded in a project of national cultural development. Second is that teacher and students present animation as a design skill, based on the principle that design solutions must be unique to the creator, to the project and to a local cultural context. Accordingly, the NID and IDC produce animation graduates who identify not as animators but interdisciplinary and autonomous designers. This exchange also highlights an activist political rhetoric, whereby students are socialized to not only accept but embrace occupational flexibility as a professional virtue. Whereas the current conditions of the Indian animation sector are perceived to place limits on personal and professional identity, design offers the possibility of industrial change, towards greater autonomy. However, while this creative independence is corroborated by alumni, they continue to face persistent challenges supporting themselves in animation practice.

This reveals a third unusual feature in design education: its self-imposed distance from industry. It is clear that the prestigious design institutes produce talented graduates who are adaptable, independent and able to find professional outlets for their skills. However, their ideals are not aligned with the stated needs of major animation employers, where a conceptual focus on individual creativity in social context conflicts with the industrial division of labour. A commitment to interdisciplinary design does not necessarily result in positive outcomes if graduates lack the skills required by the sector they seek to enter, if indeed they are interested in industry in the first place (Ball, 2002: 10). The design institutes do not provide either the volume of graduates needed to supply demand for entry-level technical employment needs or people who can afford, against economic or family pressure, to start at the bottom of the current industrial hierarchy. This results in a deep

division in Indian animation education between government design instruction and a growing for-profit training sector.

Approach

This article is taken from a wider study of reflexivity in Indian animation concerned with industry self-analysis and critical reflection. This is based on the assertion that the statements and dialogues of animation practitioners, both public and private, individual and institutional, should be considered the key sites where their culture is conceived, interpreted, negotiated and reproduced (Caldwell, 2008). I follow a hybrid approach to industrial analysis, based on constant comparison between interview accounts, participant observation and textual analysis. For this article, I also integrate Wenger's (2000) Social Learning System as a sensitizing framework to aid understanding of identity formation in an institutional context. The notion that novices learn and develop identities through social participation is well supported by educational literature. However, my preference is that existing models and debates earn their way into the analysis only as they describe observed data (Glaser, 1978). Social Learning helps reveal how the NID and IDC operate as communities of practice, featuring shared domains, close interaction between participants and a formally defined 'knowledge base' (Wenger, 2006: 2). Moreover, this allows me to look beyond formal instruction towards observation and practice.

As Irena Grugulis and Dimitrinka Stoyanova (2009: 139) suggest, social learning blurs the boundaries between learning and doing through an emphasis on participation: 'the designer is prompted to new and innovative activity by observing the designs of others.' Further experience leads to not only greater competence, but also social identity through fitting that experience into a community frame. Wenger (2000: 228) describes three 'modes of belonging' or ways of participating in social learning systems that I also adapt here: (1) engagement – participating in practice together with others; (2) imagination – placing oneself in a social context; and (3) alignment – coordinating individual actions and understandings with collective objectives. Notably, Wenger claims to use imagination in the same sense as Benedict Anderson (1983), affording, at least in part, educational and professional communities the same status as nations. Likewise here, I view the conflated national and learning communities as both *actual* and *imagined.* Students are not only made aware of the diffuse creative and professional practice of animation in India, but are asked to conceptualise that community and their own possible place within it. By prioritizing reflexivity in this way, this research directly intervenes in on-going debates over the relationship between creative practice, identity, and social structure.

This project has involved interviews with 51 animation practitioners. Investigation of the government design institutes centred on two key events where I could directly engage with participants: the NID's 'Chitrakatha International Student Animation Festival' on 19–23 October 2011, and the 'Damroo: Creating Content(ment) for Children Seminar' from 10–12 November 2011 at the IDC. These occasions presented several key advantages for study, bringing together a range of stakeholders from across the country. These included not only members of the immediate school communities but also professional contacts from industry. Design faculty acted as 'key informants' who could facilitate contacts across these networks. The resulting data comprised collected texts, extensive notes and intensive interviews with five teachers, five students and nine industry alumni (see Table 1).

In the first section, I examine the trajectory of design education, introducing the politically fraught role of design in the conception of national identity. The design instruction favoured by the government institutes not only places them in a wider context of prestigious creative skills education, but also asserts a meaningful connection to the local environment. This is manifested in

Table 1. Design Institute interviews.

Design Institute Interviews:

The National Institute of Design (NID) Ahmedabad	*The Industrial Design Centre (IDC), Indian Institute of Technology Bombay (IITB)*
Faculty	*Faculty*
- Sekhar Mukherjee	- Shilpa Ranade, Associate Professor
- Ajay Kumar Tiwari	- Sumant Rao, Associate Professor (Animagic)
	- Nina Sabnani, Associate Professor
Alumni/Visiting Faculty	*Students*
- Arnab Chaudhuri	- Dharma Rao Balaga
- Suresh Eriyat (Studio Eeksaurus)	- Piyush Kumar Verma
- Vaibhav Kumaresh (Vaibhav Studios)	
- Pradeep Patil (Roaming Design)	
- Dhimant Vyas (Zynga)	
Alumni	
- Shraddha Sakhalkar (Roaming Design)	
- Rita Dhankani and Mehul Mahicha (Vivi5 Animation/Art/Design)	
- Debjani Mukherjee (Bol, The Language of Children)	
Students	
- Nalini Bhutia	
- Krishna Chandran and Manasi Parikh (Bechain Nagri)	

simultaneous reflexive assertions of cultural affinity and personal autonomy. I build on this in the second section by investigating how students articulate their developing identities. Here, they reflexively account for the professional realities faced by autonomous designers in the market for animation labour, but do so at an overt distance from industry. Accordingly, in the third section I examine challenges to a design-based education approach, the limitations of training in a highly individualistic mode of creative practice and how the politicised process of socialization in the design institutes might hinder graduates. I conclude that, despite the crucial role the design institutes have to play in generating and sustaining innovative practice, their main contribution is as laboratories for identity that students, teachers and alumni draw upon as they radically reimagine the culture of production.

1. Design, animation, and cultural development

Design education occupies a politically charged position in the conception of Indian national identity. The way animation is taught as design at the NID and IDC complicates the already contested role of education in the evolution of the cultural industries, and the emergence of animation in particular. Billy Matheson (2006) investigates the interaction between education and industry, with a focus not only on economic growth but the social outcomes for design professions. He asserts a growing tension between design education and cultural change. For social theorist, Pierre Bourdieu, 'the role of educational institutions is to see the "reproduction" of culture as it is' (p. 58). However, these same institutions exist within a capitalist tradition of promoting cultural change, not only through discourses of technological innovation and creative trends, but also through dissatisfaction with the cultural and economic status quo, educational reform and advocacy for evolution of

industrial practice. Further, in order to foster innovation, design education must empower students to take control of their own learning experience, providing them with opportunities to practice 'the art of making decisions … and blurring the boundaries between learning and working professionally' (p. 60).

At the NID and IDC, this is reflected in the stories teachers tell about how animation came to be part of a tradition of purposeful design. The government institutes' approach to design is concerned with aesthetics and problem solving, but also improvement and utility. According to publicity materials provided by the IDC:

> A Designer is a professional who creates new products and environments or improves those that already exist. A designer by nature is a highly creative person and enjoys solving problems. Designers constantly keep in touch with new materials, processes and technology and readily understand aesthetic, social and functional needs of users. (IDC, 2012a)

To interrogate the processes of socialization and identity formation that go on throughout animation design education, it is necessary to understand what these institutions have been set up to achieve. Animation curricula at the two design schools emphasize content creation and storytelling in an imagined cultural milieu, utilizing an interdisciplinary problem-solving approach. The stated objective is to introduce students to a broad base of design skills and how they may be applied to animation within Indian narrative and aesthetic traditions:

> The Animation program in IDC strives to create people with expertise who will eventually emerge as leaders to influence the future of Animation … India will soon be a player in the international framework of animation production. This turning point brings with it huge responsibilities. We are a newly born, yet unnurtured potential animation culture without a substantial animation history. It is an important time [for] learning and practice that is informed by an indigenous sensibility. (IDC, 2012b)

Considering their status as government-run schools, what is most striking about these institutional cultures of animation design is the extent to which they embrace change. Students are encouraged to develop practitioner identities based not on the current demands of industry but in the traditions of the nation and the possibilities of animation in the future. In the absence of a substantive animation history, this narrative calls upon a history of Indian design.

Purposeful design

Comprehensive design education has been a project of Indian national identity from its inception. The first art schools in the country emerged in the 1840s (*Design in India*, 2005: 1). Design as a discipline can be credited to polymath and Nobel laureate Rabindranath Tagore and the aesthetic and intellectual revolution of the Bengali Renaissance. In 1958, a decade after independence, American designers Charles and Ray Eames were invited to produce the 'India Design Report' (1958) conceiving design as a fundamental tool of nation building, fostering quality of life, industry and communication. The result of that report was the 1960 founding of the National Institute of Design (NID) in Ahmedabad. In his biography of NID teacher RL Mistry, Prakash Moorthy, the first graduate of the animation program, describes the founding 'committed to the ingenuity of the Lota [a simple metal-ware jug]. Committed to design, as a vehicle to social change' (Moorthy, 2005: 59). This was followed in 1969 by the addition of an Industrial Design Centre to the Indian Institute of Technology (IIT) campus in Mumbai including, for the first time, a postgraduate program in design.

While the institutes place themselves within a long tradition of design, students and faculty within them also invoke the histories of the institutions themselves. This is particularly true of Nina Sabnani who has been instrumental in setting up both animation programs. She recounts how, between 1980 and 1984, Indian-born Disney animator Clair Weeks and Roger Noake, Head of Animation at the University for the Creative Arts (UCA) in the UK, conducted workshops at the NID, in the belief that 'animation could become indigenous to India' (Sabnani, 2005: 96). These culminated in the founding of a new program in Animation Film Design. Sabnani notes that the initial workshop group consisted of four students – Binita Desai, Chitra Sarathy, Sham Patel and Subash Kotwal – and herself. The two men, Patel and Kotwal 'left because they had … family pressures. They had to make a living' (personal interview, 10 November 2011). The women (Desai, Sarathy and Sabnani) were invited to stay to set up the program (with existing faculty Mistry and IS Mathur). 'We were not under that much pressure, so we were quite happy to carry on doing things.' Similar demands from family members still shape educational practice at the institutes today.[1]

Sent to observe courses in Europe and North America, Sabnani describes two basic 'strands' for animation education: schools with a filmmaking basis like Canada's Sheridan College, training students for industry, and those teaching animation as art practice or personal experimental film like the Royal College of Art (RCA) in the UK.[2] Animation programs in India would be different:

> We were there [NID] as well as here [IDC], a design institute primarily, and our mandate or order was that it should also be of some relevance to society. It should have communication aspects to it … So initially for our films in NID, everybody was encouraged to make films that were socially relevant, so to speak, and they were quite didactic in their approach. (Sabnani, 10 November 2011)

The NID and IDC were encouraged to follow a third way: something between strictly market-focused and autonomous arts-based curricula, centred upon a social mandate. Sabnani's account fits closely with complex modalities of instruction identified by Paul Ward (2013).[3] While programs have evolved over time, government animation education of this sort suggests an early 'critical–vocational' emphasis, where the creative practice of animation remains bound up in social responsibility (p. 329). Communication design was seen for its potential for national cohesion, and 'animation was a language that crossed barriers or regions' (Sabnani, 2011), a particular advantage in a nation of over 1.2 billion with over 20 spoken languages. Here, perhaps uniquely, design is contingent not only on innovative practice but on innovation in the culture of education.

Engaging cultural 'roots'

The government institutes' charge to support national development through purposeful design is reflected in the approach that they take to animation education. This in turn shapes the engagement, imagination and alignment of students as they develop their creative and professional identities. The core tenets of this approach are a self-guided exploration of cultural context and parallel development of an interdisciplinary design skill-set. I analyse accounts of these in practitioner testimony, from teachers and students in the midst of the experience, to alumni who reflect upon it long into professional life.

Course descriptions emphasize 'social and cultural contexts' (NID, 2012a) and learning 'informed by an indigenous sensibility' (IDC, 2012b). These are notions intrinsically tied to the historic sense of purposeful design. However, members of these unique learning communities seem to extend this further, likening a developing sense of identity with a personal journey of national discovery. Moorthy (2005: 57), writing about Vaibhav Kumaresh's 1999 diploma film *Whose Reality?*, equates this positively with 'a simple understanding of our layouts. There are scores of other films in the NID archives that exhibit this hugging of our landscapes and people.

Films that explore the varied styles and narrative traditions of our land.' Further, he suggests that the NID has perhaps 'evolved differently' because 'Ishu Patel, R.L. Mistry, and Naranbhai who were our first people who grappled with the rostrum [animation camera] at the gate, had roots deep in the rural ethos of our country' (p. 69). They created a learning environment that facilitated emerging practitioners imaginatively exploring their own roots.

It appears that much of this understanding of the wider landscape occurs through engagement. The design institutes put their students in contact with a range of differentiated Indian cultures within the student body; 2006 graduate Pradeep Patil describes the initial experience of arriving at the NID:

> They get us out of our shells. If I am a kid brought up in Maharashtra … a place like NID which makes it a point to get people from as many diverse backgrounds as possible … opens up our minds to a lot of other cultures, and breaks up a lot of clichés. (personal interview, 19 October 2011)

Patil's account not only acknowledges the process of identity formation taking place, but also how it serves to disrupt preconceptions, replacing them with something more complex. This implies that this more nuanced identity is beneficial in skill formation for design problem-solving and animation storytelling alike. Different elements of personal background that might previously have been taken for granted are seen as malleable building blocks for creative expression. The discourse of cultural relevance starts from a foundation in exposure to a wide variety of viewpoints. However, where this process ultimately arrives is actually a much narrower conception of culture, returning to the position of the individual within it:

> Roots in animation – I think that it helps me to question myself – okay – Where I come from, what are the stories I like? What are the conditions where I belong? From there I can pick up a story and I can tell that kind of the story to the world, and be original. (Mehul Mahicha, personal interview, 21 October 2011)

The premise of the educational approach favoured at the NID is that students place themselves within a chosen tradition to which they can belong and use to contextualize their practice. The apparent contradiction between socialization into the diversity of Indian culture and the subsequent return to personal roots evokes what animator Chetan Sharma calls an ambiguity between 'us' and 'I' (personal interview, 3 November 2011).[4] It can be better understood as a call for reflexivity, corresponding to what IDC Associate Professor Shilpa Ranade terms animation that is both 'rooted and evolved' and made by 'thinking animators' (quoted in Gurnani, 2004). To be a thinking animator is to 'engage with the medium on many levels', from the collective to the personal (Ranade, 2008). This is in all but name a call for design students to theorize their culture of production. Participation in a social learning system is at once an extremely communal and personal process. The imaginative process that the students undergo asks not only what communities they belong to but who they are, their identity, which is 'how they know' (Wenger, 2000: 238). This is how a tradition of practice can be made to support new practice that sustains cultural development. In the next section I investigate what the institutes' emphasis on interdisciplinarity and creative autonomy offers to animation students, and the links between student-led learning and emergent professional communities.

2. Imagining design communities

While many educational institutions serving the cultural industries offer students a choice of disciplines to study – from animation to advertising or fashion design – most offer relatively little latitude to move between rigidly defined professional specializations. Moreover, these distinctions are

often imposed very early in the learning process. This is in many respects a false choice. In contrast, at the NID and IDC, 'the umbrella is design' (Ranade, personal interview, 9 November 2011):

> Maybe they could do an elective in Bamboo and get an experience of that and then bring some of that back into animation … we are okay with any of that as long as I think they build into anything that they're doing a whole thought process, where they start with research and have, they kind of have it all worked out why and what they're doing.

This is what Matheson (2006: 60) terms the interdisciplinary 'way forward' for creative education, wherein students are empowered to take initiative over learning, while developing more holistic understandings of creative process. In the testimony of students, faculty and graduates of the NID and IDC, to be 'interdisciplinary' is to follow a reflexive problem-solving approach, applying the appropriate medium – be it animation or bamboo – to the task at hand. This necessitates creative autonomy. It also maps closely onto wider debates in animation education. This sense of interdisciplinarity is, at first glance, somewhat narrower than that described by Ruth Hayes (2007) in her teaching practice at Evergreen State College in the United States. Whereas the NID and IDC call for exploration across different disciplines of design, she advocates teaching a wide variety of academic concepts via practice, from mathematics to cultural resistance. However, both are characterized by application of animation across apparent boundaries to address social and pedagogical need. What unites them is a focus on a learning community, critical-thinking skills, and social responsibility (pp. 24–25).

It is through interdisciplinary experience that thinking animators find solutions. Their observed world is a product of imaginative belonging, their engagement is interdisciplinary. The NID curriculum calls for 'scope for opportunities to integrate experiential and explorative learning in order to understand and achieve a high degree of creative innovation and quality' (NID, 2012b). In practice, 2002 graduate Rita Dhankani credits this exploration for her professional flexibility:

> Whatever medium is best suited for a subject you have to go further and learn it and do it. And NID will help you. It is like that. NID is like a parent. You must first build up your base strongly, like come out with an interesting story, and what is original about it, what is new about it, and see which medium works best for the story, not the other way around … Design allowed me to play on all platforms. (personal interview, 21 October 2011)

The consistent message from the students and teachers is that a story must be told a certain way, in alignment with the identity and practice of the storyteller. Beyond summarizing the core ideals of the animation curriculum, Dhankani synthesizes a range of ideas about how she conceives her own work, and how that has been influenced by her time at the NID: design with purpose; originality linked to both individualism and an Indian design tradition; a commitment to interdisciplinarity.

Entrepreneurial learning

Skills development in the cultural industries traditionally draws upon the transfer of knowledge to take up professional practice and integration into the social networks that support continued practice. Within the model of a coherent workplace community of practice, these two distinct processes have taken place side-by-side (Grugulis and Stoyanova, 2011: 349). New networked forms of organization built around flexible labour have placed more pressure on formal educational institutions to provide skill formation, but are notably silent on the latter. It is significant then that the students at the design institutes enter into a learning network where they develop both creative skills and social norms. However, the time any one student spends as a full-time member of this

community is short. A school is by definition an impermanent or transitional community where participants socialize and learn, and then depart to enter other networks. This is why it is so significant what kinds of practices and identities are most represented in institutional testimony. In particular, I observe a repeating cluster of student and alumni accounts that pose their work in terms of independence and entrepreneurship, strongly suggesting that these are learned aspects of emerging creative and professional identity.

This testimony reveals how students and graduates have used their shared educational experiences to shape their own group identities, forming networks that persist into professional life. The strong alignment between these perspectives reinforces not only the existing institutional community, but provides a base from which to explore new modes of practice, learning across boundaries. Here, 'boundary processes' are interactions between the learning environment of the school and 'broader learning systems such as an industry' (Wenger, 2000: 226). Learning on the boundaries presents opportunities for new information to enter the knowledge base. This might be reflected in how participants respond to outside challenges or reach out to other learning communities, adding complexity to their emerging identities. The school provides them with tools to help them make the transition, as Linda Ball (2002: 11) puts it, 'a shift towards an outward-looking culture providing a bridge with the real world'. The challenges surrounding the creation and maintenance of these boundary connections with career and professional identity are among the central concerns of this research.

Although faculty at both the NID and IDC are very clear about the kind of priorities they try to instil in their students, neither program prescribes specific professional trajectories for their graduates:

> Graduates of this programme find rewarding careers as animators, character designers, story-board artists as well as creative directors, producers, consultants and designers in many organizations such as Channel [V], MTV, Nickelodeon, Cartoon Network, Tata Interactive, Infosys, Cognizant to name a few and also as individual designpreneur or as faculty/designers at various design schools in India, including their alma mater, and abroad. (NID, 2012a)

That the neologism 'designpreneur' finds a place at the heart of the NID curriculum hints at where the alignment within the learning community resides, and as a result how many students begin to conceive themselves in their future professional identities. The practice most valorised by both students and faculty is independent animation supported by freelance design. This is the arrangement that gives graduates like Debjani Mukherjee the most freedom to create and have control over their own content, telling stories drawn from their own cultural perspective:

> Let me do something else, and then, I will fund my own films because anyways, I have to do it because I thought I have to give birth. It is like I will burst. So, if not by this way, I will have to give it in some other way. (personal interview, 25 October 2011)

The way many approach autonomy is by supporting personal work with commercial contracts. The first step on this path is freelancing. Students feel a measure of confidence in their predecessors' success. 'Most of the seniors, a lot that I know, will go for freelancing. They are doing pretty well at it' (Bhutia, personal interview, 25 October 2011). In freelancing design alumni don't limit themselves to animation practice. Mukherjee has conducted workshops with children, moved into illustration and educational pop-up books. These areas have also been identified by students at IDC. Piyush Kumar Verma hopes to pursue illustration for the European market, and Dharma Rao Balaga sees potential in a growing market for e-learning materials:

> I see in the future a lot of things happening through new media … In the educational area animation is very big industry. So I am going to do that … Actually, particularly I am going to my own set up. (personal interview, 13 November 2011)

As in the case of the institutes' interdisciplinary focus, this attribute also puts them on the forefront of educational design. More and more design graduates are habitually working outside the confines of formal employment. Student accounts suggest that NID and IDC establish professional autonomy, not as Ball (2002: 12) would have it as an 'option' to be considered, but a norm. Indeed, this conditioned independence, like interdisciplinarity, reflects their identity alignment as students. This sets the design institutes apart from industry – where 'we work on a particular thing, but here we can explore so many things' (Balaga, 13 November 2011).

'Bechain Nagri'

To many students it is clear that the institutional culture they perceive 'in industry' is not consistent with the identities they have established in school. There is no obvious social learning network for them to socialize into as design professionals – and yet, they are encouraged not only to seek these out but also to develop their own. A case study in how students have set out to devise their own social networks to accommodate their newfound membership in an interdisciplinary design tradition is the student collective 'Bechain Nagri'. Bechain Nagri (or Restless City) is a project of the NID studio shop, allowing students to sell art or design services (bechainnagri.com, c. 2013). It also follows Matheson's (2006: 60) call for students to 'practice the art of making decisions' by 'creating their own learning environments'. As member Manasi Parikh explains:

> It is just a bunch of restless people waiting to do something, to come together, pooling their ideas and get something good out there … we call it a space where people can come and collaborate, and basically get to know each other on a work level. (personal interview, 21 October 2011)

Final year students at the NID, Parikh and Krishna Chandran are critical of Indian producers whom they see as favouring proven content that does not reflect original design, an implicit failure to trust storytellers based on an overemphasis on profit. However, they also recognize that creative freedom comes from controlling one's own funding, and this is not possible without both a social and economic support structure:

> What we really want to do is be able in the next few years to produce our own content. So we don't need to run to people and worry about producers. And because we know we can do really good stuff. And in the next five years through this project we hope to collaborate … when you do good work … other good people will come to you. (21 October 2011)

What sets Bechain Nagri apart as an entrepreneurial social network is the extent to which it seems to replicate the conditions of social learning that Parikh, Chandran, and their collaborators have adapted to throughout their education experience. The foundation of their practice is multi-media, leveraging experience across different disciplines of design they have experienced at the NID. The members produce sketchbooks and t-shirts featuring their designs which draw upon a range of aesthetic traditions. They support future goals in animation by looking beyond the institutional community for a framework to hold this practice together. The first example they cite is the crowd-sourcing funding site Kickstarter:

> We are very inspired by that idea as well because – nobody in India would fund online projects that way so we need to look at another model. We were thinking of something wherein artists can earn their own money through merchandise so you do an illustration and the illustration is printed over various products and it keeps fetching you money through royalty. (21 October 2011)

In citing the models they wish to apply and emulate in their own practice, Parikh describes the way that these actions draw predominantly from outside Indian animation which she perceives to be unconducive to innovation and taking risks with original ideas. By creating their own networks modelled on outside examples, students and graduates hope to bypass current industrial structures by pooling their own technical, creative and economic resources. It is not possible simply to apply an approach from one community to another without making changes based on local conditions. Based on their experience at the NID, Parikh and Chandran recognize these design challenges:

> A lot of those things that we think [about] are still very young in India. Forget young, they're not even there yet. There are people who have directly copied the Threadless model. There are people who are just doing things here because they work [in the west], and I think that is stupid because India is a different country. (21 October 2011)

This is a reflection of design rooted in a specific cultural context, a hallmark of the NID educational approach. It is a specific example of how Parikh and Chandran have socialized and used their newly acquired skills to build competence at problem-solving in a particular Indian context. These experiences build an identity: Bechain Nagri is their own innovation, a boundary process, extending that social learning into new areas.[5] For those attracted to an entrepreneurial approach to animation design, this presents a path to career development. Those who develop a sense of belonging within international traditions of independent art filmmaking face potentially greater challenges:

> In India there is no government support for independent film. There is nothing like that so we have to support ourselves. I don't see it happening soon, at least not from the government … Sekhar [Mukherjee] likes to encourage independent film from his students … My biggest desire is to become an independent filmmaker, but I don't see it happening anytime soon. (Bhutia, field notes, 25 October 2011)

Students like Nalini Bhutia report feeling that their identities are out of sync with what industry requires.[6] This is based on very personal convictions but creates a clear anxiety that persists into their professional lives. This is a specific challenge to the design approach to animation education in India. In the same respect, emphasis on design becomes a cultural challenge to assumptions of service-based industry.

Perhaps the ultimate reflection of this approach is the objective that when graduates depart from the institutes they are dispersed across the country. That some graduates might return home to practice in rural areas fulfils the vision of professor Mistry, who 'pushed his students to look in their own backgrounds, to draw out styles and narratives of the regions they represented' (Moorthy, 2005: 73). From the perspective of students and professionals today, it seems that such an idealistic vision of local may be difficult to achieve in practice. Bhutia, from Darjeeling, asserts just the opposite. 'Whenever you finish you cannot go back there because there are no opportunities. That is the saddest part. You have to go to the cities: Bangalore, Bombay' (field notes, 25 October 2011). As I investigate in the following section, entrepreneurial practice is possible, even necessary, but even here, the educational narratives and developing professional identities explicitly conflict with industrial demands. All this adds up to a mode and community of animation practice that students

are socialized into. Having developed such an identity, it remains to be seen what they may do with it and what they might add to it. It is through student entrepreneurism that it is possible to observe how the social networks generated at the design institutes emerge into the wider production environment.

3. Distance from industry

I have examined the trajectory of animation as design education; students' reflexive engagement in cultural relevance and personal roots; alignment to interdisciplinarity and independence as cultural norms; and imagination of professional communities, all defined in practitioner testimony as progressive advances in pedagogy. In the final section, I investigate the pitfalls of such an imposed distance from industrial practice and the limits of a culturally-rooted yet individualistic mode of education, both in a social and economic context. As Ward (2013) observes, close links to industry are often seen as vital to animation courses, but can be seen as limiting graduates to particular vocational roles. In contrast, programs that emphasize individual creativity outside the industrial mainstream may be seen as an attempt to focus upon art outside its social context. At the government design institutes where cultural relevance has long been the principal concern, it is not so much a function of 'transcending' context (Ward, 2013: 327), as which aspects to embrace and which boundaries to cross.

Not 'industry ready'

A widespread criticism of the design-based animation education provided by the NID and IDC, and the one implicit in the apprehensions of students like Bhutia, is that students are prepared to work as self-sufficient designers, but their skills and expectations are at odds with industrial conditions. They have learned to draw on their cultural experiences, first to create a unique cultural identity as an artist and storyteller, and then to create their own content from scratch.[7] But this is not aligned with the present demand for technical practitioners. Consistent with trends in design education worldwide, there is little or no funding for graduates' output as art or creative practice for its own sake. While students may develop substantial creative talents, they lack specific skills and social understandings tailored to the conditions in the industry they are entering (Ball, 2002: 10). This is also a frequent criticism of the government design institutes, emerging from the commercial training sector. Maya Academy for Advanced Cinematics (MAAC) CCO Sanjiv Waeerkar describes his experience with design graduates:

> They were in their own world. They were in their own particular styles and limitations, which of course, is a wonderful thing. The National Institute of Design is not on physical structure of a character; they will go on distorting and doing very I would say design-oriented animation. Now, the outsourcing work which comes to India is not on those lines. (personal interview, 8 November 2011)

This is unsurprising. NID and IDC students are not specialists in any one part of an industrial workflow. They laud their faculties for encouraging them not to conform to convention and expectation but, as a result, find difficulty in taking direction and conforming to defined client constraints. As Ranade asserts, they are not even exclusively animators. Frameboxx founder Rajesh Turakhia notes that these same skills have made small numbers of design graduates suitable for work as creative directors (personal interview, 7 November 2011). However, this requires students to work closely and cooperatively in teams, yet another area of criticism to which the design institutes have had to adapt:

The feedback we got from the industry was your students are very bright. They have very good ideas, but they are very bad on time management. They really cannot complete anything on time, and they cannot work in teams. (Sabnani, 10 November 2011)

Design faculty and students recognize the need for industry specialists and several draw clear distinctions between those skills and what they have themselves been taught to do:

What tends to happen here is that you tend to do a little of everything, and get not so good at everything. You can just about manage to do everything, but to do something really good I think it is necessary that you have people who know their job. (Parikh, 21 October 2011)

This suggests a division of labour between different kinds of animation skills, design and technical competence – self-contained and industrialized production.

These concerns are repeated across student accounts that demonstrate uncertainty as they view industry from a distance. 'We don't really know what is happening in the industry because we're here' (Chandran, personal interview, 21 October 2011). This has the effect of disrupting knowledge transfer between educational and professional communities, while further aggravating students' difficult transition between them. An exception to this appears to be where graduates gain work experience with alumni. Given the long-standing engagement of prominent practitioners like Arnab Chaudhuri, Vaibhav Kumaresh, E Suresh, and others, it is perhaps unsurprising that this is the case. Parikh's experience as an intern at Vaibhav Studios is particularly revealing. '[Vaibhav] is among one of the nicest people we know out there. So our picture of industry is very rosy and nice because we enjoyed working at his studio and it was a very nice work culture' (21 October 2011).

The separation from industry is not only an attribute of student life. It is also a reflection of faculty experience. For Ranade, IDC provides a setting which allows her to engage in the same reflexive practices she asks of her students:

I came here to teach because it allows you to do research, reading, writing, and make your own thing, do projects and teach, alongside teaching, consultancies, everything you can do. So I thought it was a good space to be in rather than do … commercial things you don't like. (9 November 2011)

The perspective that academic work could offer creative opportunities impossible in commercial practice is repeated across faculty testimony. The NID's Sekhar Mukherjee came to teaching following professional experiences that he found intolerable:

I got a call from NID. The director has changed. We are looking for young faculties. By that time I was so tired of this whole boring stupid monotonous psycho frenzied industry where they're saying: 'I draw Hercules perfect' and I do rickety drawing so 'you are not animator'. I was frustrated. I said I will. (personal interview, 25 October 2011)

Frustration with a perceived industry status quo shapes many faculty perspectives. Coupled with a long tradition of purposeful design, this helps explain why these programs aren't shaped by industry needs but by a perception of what kinds of animation practice are possible and how innovative educational practice might produce change in the conditions of industrial practice.

Practitioners widely agree that Indian animators must generate more original content. Yet there is disagreement on how this is to be achieved and the role that educational institutions will play in this process. Students emerge from the design institutes with both the skills and desire to tell their own stories, whether the industry demands them or not. Again, this is consistent with the role models these aspiring design professionals choose to emulate. As Mahicha asserts 'NID has a big role

… to produce our own identity of animation. I can see very few animators doing that. Vaibhav is doing that. Suresh is doing [that]. Apart from them nobody is doing that' (21 October 2011). This comes down to an activist effort to change the cultural conditions of animation practice in favour of a unique identity based on local conditions.

Economic and cultural challenges

Finally, I suggest design education also faces challenges quite apart from the industry. One of these is fairness of access, which may radically shape professional outcomes. This is an issue born in large part from institutional success. The NID and IIT are ranked by international publications as among the top design and engineering schools in the world (*Business Week*, 2007; *US News and World Report*, 2008).[8] In order to maintain the quality of education within their institutions, both the NID and IDC animation programs are extremely selective. At the NID, only 15 students are selected for the animation program (NID, 2012c).[9] Although both institutes offer scholarships or fee waivers, the costs of attendance also represent a significant barrier, up to more than INR250,000 ($4,103) per year. These have increased significantly over time, and NID instructor Ajay Tiwari admits that this may cause a change in the student population: 'The students who cannot afford it really won't come now … [The cost is] 4 to 6 lakhs [$10,000] for the whole course. For six lakhs you can buy a house in some places' (field notes, 25 October 2011).

Another reason for this is the family pressure on students to pursue high-status employment. Both the NID and IDC are internationally prestigious institutions, in the wider field of industrial design. Relatively speaking, and in the case of animation in particular, they still comprise a notably unknown and largely undervalued educational sector:

> When students come to a certain age, you either become a doctor or an engineer or a chartered accountant or take care of the family business. These are the options that you have got. Art [and] filmmaking are not a part of these options. (Rao, personal interview, 13 November 2011).

This pressure has a marked impact on the identities of those who attend. In order to compete, prospective students have generally excelled in secondary education. High marks on college exams open up career options in fields with high social standing, in particular engineering and medicine. This means that these students have to counter enormous social pressure and considerable personal risk in order to pursue a design education, regardless of institutional reputation. Debjani Mukherjee presents a particularly illustrative example:

> I completed my graduation in EcoStatMaths … I did very well, and then, I had to fight with my parents. I told them 'okay, I have done my graduation. This is what you wanted. So, now, I'll do what I want', and my father was, you know, 'okay', and then he came with me here during my exams … You don't have good colleges. You do not see that it's also recognized by people. So, once my father came here, saw and met Sekhar and other people around, he said, 'no, it's as good as that'. Once he saw this, he was fully game for it, and from there till now, they are really supportive, my parents. (25 October 2011)

From the outset, relationships between students and faculty are shown to be crucial. Mukherjee describes the important role played by faculty in not only bringing them into the NID community, but bridging the gap between their emerging identities as designers and the cultural expectations of their parents about design education, the arts and animation.

IDC Associate Professor Sumant Rao perceives this as not only a challenge of animation, but also as a barrier for design students to overcome in their own identity conceptions. To Rao, the

educational and industrial spaces of animation and engineering are not mutually exclusive. A student can be both animator and technologist. These may not be mutually exclusive but do stretch the current boundaries of belonging and identity to the limit. These learning systems may require substantially different kinds of participation – especially when it comes to generating an imagined community and aligning practice with it:

> So, they go through a lot of trouble to get into an institute like IIT because IIT assures you a good job … So, my way of looking at it is, if they have got in, they have got the brains because it's really tough to get into IIT. If you have got the brains and if you want to do film making, but you are supposed to do engineering, use engineering to do your film making … there are not too many people out there who can do that. So, it's a niche that does not exist in India … You can become a filmmaker where nobody can touch you. (13 November 2011)

As Ward (2013: 325) suggests, 'loosening' disciplinary boundaries has the potential to fundamentally alter animation learning. A student who can imagine and construct an identity as a practitioner within the cultural confines of both animation and engineering would not only be more competitive professionally; he or she would contribute to a productive expansion what it means culturally to be an animator, and a member of the animation community. Fostering an accessible environment where such boundaries can be crossed is central to the long-term viability of animation as an interdisciplinary field of study.

Those students who are best equipped to thrive in this demanding environment are those under the most pressure to pursue other conventionally respectable and reliably lucrative careers. What Rao proposes is a pragmatic solution. Within one of the world's most prestigious engineering universities, Rao's boundary-crossing practices show the potential of expanding social learning in animation into new areas, for education becoming an agent of change through constructing new student identities. This is at the heart of the design project of animation. Tiwari points out that the potential interdisciplinarity of animation practice may be much wider still, noting that design is the only constant in an evolving medium across industries: 'If you communicate through stories you communicate far better … They are doing new kinds of jobs you could not imagine fifteen years ago. They realize the importance of critical thinking' (field notes, 25 October 2011).

Conclusions

A summative example of how design instruction is reflected in creative and professional identity formation can be seen in my interactions with IDC student Piyush Verma. The family pressure he describes to follow a set career path and his sense of personal responsibility in diverting from it, are considerable:

> My father and mother both appreciate my work, but they don't want me to go into the animation field, because they think – they are not exposed to this business. They only want me to be an engineer or a doctor, clichéd things … I told them that, 'I know mom that in India there is a lack of opportunity in the animation field. People are not doing a really good job in animation, and they are not paying also very well, but for me, for my happiness, please try to live on your pension.' (personal interview, 13 November 2011)

To a student like Verma, particularly interested in art design, the differences between career options seem particularly stark. He has developed a creative identity that is inconsistent with the technology-based employment available to him as an IIT graduate diploma. Beyond family pressure, he feels no incentive to engage, imagine, or align with a new way of belonging.

Based on the accounts of a range of practitioners from within the design institutes and the animation industry, it is clear that the prestigious programs at the NID and IDC produce skilled and adaptable graduates, who nonetheless face a mismatch between educational and industrial demands. This includes the national studio success of prominent boutique animators like Kumaresh and Suresh, as well as the designers and freelance animators who have followed their example, including Patil, Mahicha, and Dhankani. It also provides the basis for ambitious entrepreneurial efforts like that of the Bechain Nagri collective. The ideals of this educational approach are not aligned with the stated needs of the largest parts of the Indian animation industry, where the ideal of interdisciplinarity design conflicts with specialized proprietary workflows. In the absence of funding for graduates' output as art in its own right, the industry still lacks the capacity to commercially produce and distribute their creative output. This raises additional questions: What will it take for industry to make the best use of design graduates? Can the highly individualistic animation practice espoused here ultimately be integrated into commercial practice?

Lacking either commercial infrastructure or business model, neither the NID nor IDC provide education as a product that is directly responsive to either industry or student market demand. It is significant that both the NID and IDC cater to a small number of exceptionally talented students. Accordingly, neither caters to students across a range of aptitudes. Finally, each student at the design institutes makes an important trade-off. They engage in an experiential learning environment that helps them develop unique identities as design professionals, but they face substantial professional risk with little cultural precedent and no promise of success.

Funding

Notes

1. Female animators in India report that their gender has both restricted and opened up their educational options. This echoes similar experiences across a wide range of animation contexts (Furniss, 1998: 234).
2. These are what Ward (2013: 328), citing Niles Lindahl-Elliot (2000: 19), terms the 'market-oriented' and 'critical-vocational' modes of animation instruction.
3. Following Gramsci (1971), Ward (2013: 329) divides programs into the classical – that is theoretical, the manual–vocational, and the technical–vocational.
4. The history of the design institutes is likewise contradictory, mixing individualistic methods with a collectivist national project.
5. Whether prompted by faculty or not, the next generation of animators has arrived at the same solutions as many established boutique practitioners and firms.
6. Troubling for independent animation in general; it is even more so for the predominantly female animators like Bhutia creating abstract and tribal-inspired art.
7. This is not to say that students create content without regard to a client or customer. Consistent with a 'purposeful' ethos, many NID students create films in collaboration with NGOs.
8. It is perhaps telling that these rankings do not specifically address animation.
9. This is out of 40 students in communication design who have already passed the Design Aptitude Test for GDPD/PGDPD, studio tests and a competitive interview process. There are also spaces reserved for students from tribal or caste communities.

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The Animated Esperanto: The Globalist Vision in the Films of Sándor Reisenbüchler

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Abstract

This article examines the work of the Hungarian collage animator Sándor Reisenbüchler, whose career lasted from the mid-1960s until his death in 2004. It poses theoretical questions concerning the concept of an animation Esperanto, pivoting off Béla Balázs's early theories of an international film language. Through close studies of two of his films, the author claims that Reisenbüchler develops an animation Esperanto through his construction of landscapes, a significant break from an animation tradition that develops an Esperanto through the body. The article ties Reisenbüchler's animated Esperanto to his globalist, transcendental politics and situates him within the context of Hungary's socialist system. Finally, the article places Reisenbüchler's work in the context of Pannonia, the major animation studio in Hungary, to which he was affiliated throughout his career. The films of Marcell Jankovics, Hungary's most famous animator, suggest a more complicated reading of the interactions between the body and the landscape in the animated Esperanto. In conclusion, the author posits a possible dialectic between internationalism and globalism within the animated Esperanto, and applies this dialectic to Balázs's initial conception of the international film language.

Keywords

animated Esperanto, collage animation, Hungarian animation, landscape, Marcell Jankovics, Pannonia, Sándor Reisenbüchler

Introduction

In his 1924 book *Visible Man* (in Balázs, 2010), Béla Balázs noted the rise of a cinematic Esperanto: 'The art of film seems to hold out the promise of redemption from the curse of Babel. The screens of the entire world are now starting to project the *first international language*, the language of gestures and facial expressions.' Balázs, a Marxist, argued that capitalism served as the catalyst for this Esperanto's development: 'The laws of the film market had room for only one universal

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language of gesture, which had to be comprehensible in all of its nuances from San Francisco to Smyrna and to princesses and working girls alike' (p. 14). Six years later, in *The Spirit of Film* (1930, in Balázs, 2010), Balázs addressed the problem of dialogue in sound synchronization, lamenting that a loss of 'visual nuance' accompanied the new technological advances. He missed the 'mute dialogues [which] seemed to convey the profoundest human revelations, even when the overall storyline was nothing but the most tedious kitsch' (p. 203). And yet, even as he lamented the lost art of silent film performance, he did not mention the lost promise of the '*first international language*' (emphasis in original).

In *Visible Man*, Balázs ignored animation, but in *The Spirit of Film* (in Balázs, 170) he wrote at length about the medium in terms that parallel his earlier ideas of silent film performance. He claimed the stories in *Die Abenteuer des Prinzen Achmed* (The Adventures of Prince Achmed) (Lotte Reiniger, 1926) and *Le petite parade* (The Little Parade) (Ladislas Starevich, 1928) arose from 'form' and were distinctly 'non-literary'. In other words, the most important aspects of the dance of Reininger's silhouette cut-outs and Starevich's puppets did not concern plot, content and spoken language, but the primal experience of watching bodies express themselves. His observations laid the groundwork for what could have been a new argument, that the animation medium could birth its own Esperanto. And yet, Balázs did not explore such a possibility. His omission is curious, as the animated Esperanto is almost as old as the animation medium.

The history of the animated Esperanto, like the history of the original Esperanto language, is a history of politics and economics. Studio heads initially feared that Mickey Mouse's English dialogue would become a barrier to international success. These fears proved baseless and the mouse gained fans in France and Germany (Klein, 1993: 9). The language the mouse spoke was less important than the technological feat of his ability to speak at all, and the unity of his voice and body. The flat graphic animation of Yugoslavia's Zagreb Film used the universality of geometric shapes to communicate essential human emotions and body types, and the victory of *Surogat* (Ersatz) (Dušan Vukotić, 1961) at the Academy Awards legitimated a model for transnational success. In the 1980s, the Soviet Union's Soyuzmultfilm claimed that their workers 'create their universe like gods, where man, beasts, animals, water, and grasses all speak in the same language … Here everybody lives according to the remarkable, kind laws of the Land of Animation' (*Gudok*, 1986, quoted by MacFadyen, 2005: 168). The history of the animated Esperanto does not contain a clear trajectory. The actual Esperanto language was codified, and its originator had to contend with issues concerning beauty, accessibility, logic and ideology (Forster, 1982: 54). Such concerns also lie underneath the animated Esperanto, but no one has codified it. The animated Esperanto is a tendency born of various circumstances that has evolved into a naturalized philosophy towards the animation medium.

The 'actors' in these animated films are the focal points for the animated Esperanto's vocabulary and grammar. The viewer literate in the animated Esperanto can understand Mickey Mouse's swaying hips in *Steamboat Willie* (Ub Iwerks, 1928), the simplified circular breasts on the female object in *Ersatz* and the hedgehog's melancholic face in *Yozhik v tumane* (Hedgehog in the Fog) (Yuri Norstein, 1975). The backgrounds may contain national–cultural markers. Mickey Mouse dances on the American vaudeville stage. *Hedgehog in the Fog* takes place in a Russian folkloristic universe. 'Special ethnographic features, national characteristics, may be introduced from time to time as local colour, as the ornamental aspects of a stylized milieu', Balázs (2010: 14) writes, 'but they are never more than *psychological motifs*' (emphasis in original). Balázs's claim may describe the role of background in *Steamboat Willie*, but Norstein's hedgehog is imbricated within an organic background that acts upon his internality. Still, in both cases, the primary source for language lies in the body, and that language crosses political borders.

Sándor Reisenbüchler, the Hungarian collage animator, developed his own animated Esperanto, one not contained in bodies. Reisenbüchler's career lasted from the mid-1960s through the end of Hungary's communist system in 1989 and continued through the post-communist era until his death in 2004. Some of his films were abstract plot-less exercises. The most memorable were tightly constructed narratives. These films were about as long as early, one-reel mini-spectacles like *The Battle* (DW Griffith, 1911) and their plots followed similar three-act trajectories. The first act depicts peace, the second act depicts war, and the third act depicts a new uneasy peace. More generally, first there is stasis; then there is chaos; and finally, there is a new impermanent stasis. *A Nap és a Hold elrablása* (Sun and Moon Carried Off) (1968), based on a poem by Ferenc Juhász, depicts a village suffering a supernatural calamity. *Az 1812 – es év* (The Year 1812) (1972) is a Tolstoyan retelling of the French invasion of Russia set to Tchaikovsky's overture. *Békéltető expedíció a Mars bolygóra 2895-ben ahogy az öreg Jules Verne képzelte* (Expedition Sent to Pacify the Planet Mars in 2895 as Imagined by the Good Old Jules Verne) (1983) is a comic homage to the science fiction of the past. (*Expedition* is a little different from the previous two films. The first act depicts war, the second act depicts peace, and the third act suggests the coming of a new chaos.) In each film, the drama acts upon the landscape and not individual bodies and accordingly the grammar and vocabulary of the animated Esperanto is located within that landscape.

Reisenbüchler was a world man, in his beliefs and in his aesthetic tastes. He saw capitalism and communism as twin evils, preferring instead an undefined third way. He was an environmentalist. He was also a UFO enthusiast. He read widely, in Russian, French and English literature, particularly Tolstoy and Verne. He mostly watched early film (George Méliès, Sergei Eisenstein and Alexander Dovzhenko) (Tóth, 2008), but he also enjoyed George Lucas's world constructions in *Star Wars* (1977) (Vajda, 2008). He discovered affinities with Terry Gilliam's cut-out animation for Monty Python and, in the last decade of his life in the 1990s, after he gained access to more American television via satellite, he became a fan of *Beavis and Butthead* (1993–1997) (Tóth, 2008). Besides *National Geographic*, he also found materials in a popular Polish graphics magazine (Vajda, 2008).

Accordingly, each of the three films adopts specific art historical stylizations. *Sun and Moon Carried Off* marries Hungarian folk and aboriginal art traditions. *The Year 1812* uses Russian Orthodox. *Expedition* riffs on *Le Voyage dans la Lune* (A Trip to the Moon) (George Méliès, 1902) and Terry Gilliam's Monty Python cut-outs. Yet despite the specificities of these stylizations, the landscapes are atavistic. Reisenbüchler has absorbed various world cultural traditions and transformed them into something primal and essential in his landscapes. The landscapes return viewers to their infanthood, to the moment they first contemplated their surroundings, to the birth of a semiotic tradition. Reisenbüchler invents a *global* language, a language that transcends political borders and the modern nation state. Disney, Soyuzmultfilm and Zagreb Film employ an *international* language, a language that accepts modern political borders and communicates across them.[1]

Globalism, animation and the sublime

Reisenbüchler's films do not negotiate with state power for his rights to the territory in which he lives, nor do they concern themselves with specific, contemporary political events. As such, through the medium of animation, Reisenbüchler imagines enormous worlds unmoored from the temporal and spatial moment from which they are birthed. They transcend their origins in search of the sublime.[2]

The sublime is of particular interest in animation studies, and Scott Bukatman (2012: 137), in particular, applies the term to his study of animated bodies. He differentiates between the sublime and the uncanny, suggesting that the sublime 'figures the unknown as excess' whereas the uncanny

'presents the familiar in terms of estrangement'. The sublime, for Bukatman 'appears and is resolved as an epistemological crisis around the limits of human knowledge'. Such excess in its relation to the body, an excess born of the phenomenon of god-like invention inherent in the animation medium, can be found in Winsor McCay's *Little Nemo in Slumberland* (1911) and *Gertie* (1914). *Steamboat Willie, Hedgehog in the Fog* and *Ersatz* can be added to this list. Little Nemo, Gertie, Mickey Mouse, Norstein's hedgehog and the fat happy hero of *Ersatz* reach towards the unexplained, but don't upset the viewer's ability to distinguish between the familiar and unfamiliar. The excess emerges from the bodies, but this excess does not discomfit the viewer. Balázs (2010: 35) describes a similar form of the sublime in live-action performance, noting Lillian Gish's facial expressions in *Way Down East* (DW Griffith, 1920). 'The description of a feeling always lasts longer than the time taken by the feeling itself', he writes, 'the rhythm of our inner turbulence will inevitably be lost in every literary narrative.' The sublime of these bodies returns man to a lost pre-lingual past.

Reisenbüchler's landscapes contain a different form of the sublime. Reisenbüchler imagines layered universes that the screens of his films can't contain, and that his source authors can't describe. In *Sun and Moon Carried Off*, his aborigine-inspired figures face the demon forces of nature. A giant still cut-out of an amorphous demon descends on the village, his body merging with the atmosphere, engulfing the purples, blues and reds of the landscape in darkness. The riot of battle in *The Year 1812* animates the landscape through blurring smoke and the giant presences of Napoleon and Russian Orthodox iconography upon the horizon. In *Expedition*, the Martian landscape is an enormous playground. These landscapes frustrate human perception and conception.

A global language inherent in landscape will carry within it different connotations from an international language inherent in the body. Those differences, in the case of Reisenbüchler's films, lie in the animation medium's approach to stasis. Kristin Thompson (1980: 117) describes stasis as a part of continuous movement in classical Hollywood cel animation, part of, not separate from, the lengthening and shortening of temporal flow. Reisenbüchler's films are condensed epics, and their use of montage feeds on kinetic energy, and yet paradoxically, many of the shots within them are either completely still or contain only slight suggestions of movement. These moments of stasis are not mere signposts in an uninterrupted temporal flow; they are one half of a dialectical relationship between stillness and movement. These moments of stasis allow the viewer, if only for a few seconds of screen time, an opportunity to study a landscape in its static state and thus locate its atavistic character. Chaos, in the form of movement, threatens this stasis and this atavism.

As a means of understanding the nature of this dialectical relationship between stasis and movement and the language which it invents, I offer close readings of *The Year 1812* and *Expedition*. *The Year 1812* shows how this dialectic relates to Reisenbüchler's conception of the past. *Expedition* shows how this dialectic relates to his conception of the future.

The Year 1812

Summary

The Year 1812 opens with the depiction of the Russian landscape, decorated with images of Orthodox iconography, giant saints that loom over the horizon and white churches in small villages. Sailors pull a ship in to shore (Figure 1). Russian Orthodox icons sprout organically from the landscape. Meanwhile, war drums beat in France. Napoleon appears at his court, the fountains erupt at Versailles, an Arcimboldo decorates a drawing room. In the second act, the French invade Russia. A riot of fire consumes the icons of the Orthodox Church. A skeleton dressed in French uniform looms over the horizon, a near mirror in shape and size of the Orthodox Jesus who appears earlier in the film (Figure 2). Bodies break apart. The shapes of dead humans, dead

Figure 1. Peacetime in *The Year 1812* (1972). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

animals and the ruins of fine art pun on one another. In the third act, a silhouette of Napoleon studies the landscape as winter comes. Fallen bodies morph into skeletons, which are in turn engulfed in the snow. Spring comes and the Orthodox churches, now rebuilt, regrown like plant life, toll their bells.

Analysis

I will describe four different forms of stillness in the film, employing terms from live-action film to describe them. Some of what I describe here has parallels to Eisenstein's taxonomy of montage in 'A Dialectic Approach to Film Form' (1977). Eisenstein's descriptions, however, focus on the constant *flow* of movement *through* montage. Following Reisenbüchler's lead, I focus on the *lack* of movement *within* montage.

1. *Absolute stillness of mise-en-scène and absolute stillness of cinematography.*

   The material in front of the camera remains completely still and Reisenbüchler's camera does not move, neither panning, zooming nor tracking. In the fourth shot of the film, the silhouettes of sailors pull a ship to shore. Although the shot refers to the movement of the sailors, it presents no actual movement on the screen. It is a still photograph of a drawn image.

2. *Absolute stillness of mise-en-scène accompanied by movement of cinematography in the form of panning, zooming or tracking movements.*

   In the first shot of the film, Reisenbüchler's camera centers on the image of a purple field surrounded by churches and houses. His camera zooms out to reveal a wider landscape,

Figure 2. Death and Chaos in *The Year 1812* (1972). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

with trees and more houses. Historical documentaries, like Ken Burns's *The Civil War* (1990), employ a similar technique in their use of still photographs.

3.   *Absolute stillness of cinematography, majority stillness of mise-en-scène, accompanied by minor movements within mise-en-scène.*

Most of the frame of the film remains completely still and only a few objects within the frame move. This category may, at first glance, seem no different from early Hollywood animation shorts. In *Steamboat Willie*, for instance, the steamboat upon which Mickey Mouse performs remains mostly still, while Mickey, who makes up a very small portion of the screen, sways his hips and whistles. In *Steamboat Willie*, the border between Mickey Mouse and the stage background on which he performs is pronounced. In *The Year 1812*, however, the objects that move on screen and the objects that don't move are far more integrated. As an example, we can consider the series of Orthodox icons accompanied by flapping flags in the 20th, 21st, and 22nd shots of the film. The absolute stillness of the staffs is preternatural in relation to flags that flap in what are presumably very strong winds.

4.   *Complete stillness of backgrounds blanketed with moving layers.*
As an example, we can consider the shot of an Orthodox Church in complete stillness, that lies underneath drifting gun-smoke.

The Year 1812 is a meditation on the threat of history and the desire to arrest its passing, and each of these four montage techniques defines this meditation. The film's first 11 shots each follow the first and second categories – presenting at various points, the landscape complete with Orthodox iconography, sailors, trees and houses – before a 12th shot that demonstrates the third. The

appearance of that 12th shot, which depicts a bellwether motioning in the wind, after a full minute of screen time that presents absolute stillness of mise-en-scène, increases the tempo and signals the chaos that will come. It threatens the peaceful order of stillness.

The use of stillness in *The Year 1812* not only complicates Eisenstein's philosophy of montage, but also recalls the pre-montage cinephilic experience of looking. These moments of stasis at the beginning of *The Year 1812* demand that the viewer study the landscapes and locate their essential, atavistic and universal characteristics. The precise, distinct movements within the scene describe the frame's excesses, the wind through the trees.

Let us pause in our discussion on Reisenbüchler and consider Eisenstein's arguments on montage in relation to his arguments on animation. In 'A Dialectic Approach to Film Form' (1977), Eisenstein explains that montage is far closer to language, which must constantly form 'words and word-complexes' – as in the pairing of shots – than to painting. At first, this may suggest that Eisenstein's own fascination with animation, particularly Disney animation, may be irreconcilable with his montage theories. And yet, within his essay, Eisenstein offers a key to understanding how his various theories coalesce: 'in painting the form arises from *abstract* elements of line and color, while in cinema the material *concreteness* of the image within the frame presents – as an element – the greatest difficulty of manipulation' (p. 60, emphases in original). For Eisenstein, the perfect photographed image, the ur-image, eludes the live-action filmmaker. His theory of montage is not entirely predicated on this fact. This point is little more than an aside in his essay. Still, this claim can be paired with his notes on animation from later in his career. In 1940, he celebrated the 'plasmaticity' of Disney animation, which he describes as

'represented' in a drawing, a being of a given form, a being that has achieved a particular appearance, behaves itself like primordial protoplasm, not yet having a stable form, but capable of taking on any and all forms of animal life on the ladder of evolution. (Eisenstein, 2012: 15)

The material within a live-action film, with all its imperfections, its inability to move in the *exactly* prescribed manner required the development of montage to create a dialectic, and thus a more complex meaning *between* shots. The morphing in animation, by contrast, could create a satisfying and dramatic dialectic between forms *within* cel animation's version of a single shot. The animator who works with drawn images, images that he creates with his own brush, has god-like control over every element of the image he places in front of the camera. The live-action filmmaker must contend with material objects that he can manipulate to only a limited degree.

Eisenstein cannot capture an ur-image in *Alexander Nevsky* (1937), a film in which he attempts to compensate for sound's disruption of silent-era montage. The film contains no absolute moment of stasis, no combinations of freeze frames like the roaring-of-the-lions sequence in *Bronocets Potemkin* (Battleship Potemkin) (1925). *Nevsky* contains instead poised shots in which the movements of figures and landscapes are subtle, similar to the third category of Reisenbüchler's montage noted above. Nevsky's troops stand in silhouette while their spears, as elongated vertical lines, sway gently, full of anticipation, while awaiting the coming of German troops. Earlier, Alexander Nevsky stands poised on the mountain edge, at times in silhouette, at times his head lit with halo-light, with only a light wind rustling his clothes. Eisenstein tries to make these images icons, representations of ideas greater than themselves. And yet, the inability to achieve the ur-image upsets Eisenstein's task. Eisenstein may want the spears to move as they await the coming of German troops, but he can never control their exact sway in the wind, and thus he can never obtain the ur-image of 'spears-swaying-in-the-wind.'

The icons of *The Year 1812*, by contrast, can achieve something closer to the ideal of what they are meant to represent. Reisenbüchler's precise cut-out of Napoleon becomes the ur-image of a universally recognized historical figure, and his Orthodox Jesus becomes the ur-image of a

Figure 3. Icon in *The Year 1812* (1972). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

universally recognized religious symbol (Figure 3). The moments of absolute stillness throughout his film allow the viewer to discover the eternality, the universal, the essential in his icons and the atavistic in his landscapes. Montage is configured here as history, as a force that upsets the purity of this stillness and all that it can reveal.

Expedition Sent to Pacify the Planet Mars in 2895 as Imagined by the Good Old Jules Verne

Summary

Expedition describes a world that modern technology once might have promised, but which will never exist. The film opens with a depiction of deepest space and after several dissolves, focuses on a war on the planet Mars between blue and red Martians. They ride one-footed alien animals and space dinosaurs. The governments of Earth agree to send a spaceship to pacify the conflict. The film indulges in a *fin-de-siècle* mise-en-scène. The French ride flying unicycles. The Russians practice sword fighting and ride a steam-powered giant horse. The Americans ride horses attached to parachutes. The English train with barbells alongside their cats. The Germans fly through flaming rings. They all meet at the American Cosmopolis, which contains flying machines that look like giant torpedoes or 18th-century seafaring vessels (Figure 4). They enjoy a final tearful night with their lovers. Onboard their ship, men dance to the accordion, read 20,000 Leagues Under the Sea do their laundry, drink and play. When they locate the Martians in question, they discover that the war previously depicted as a violent conflict with swords and flying elephants has now devolved into a childish food fight. The humans descend and pacify the aliens by spraying them with laughing gas. Once peace has been restored, they
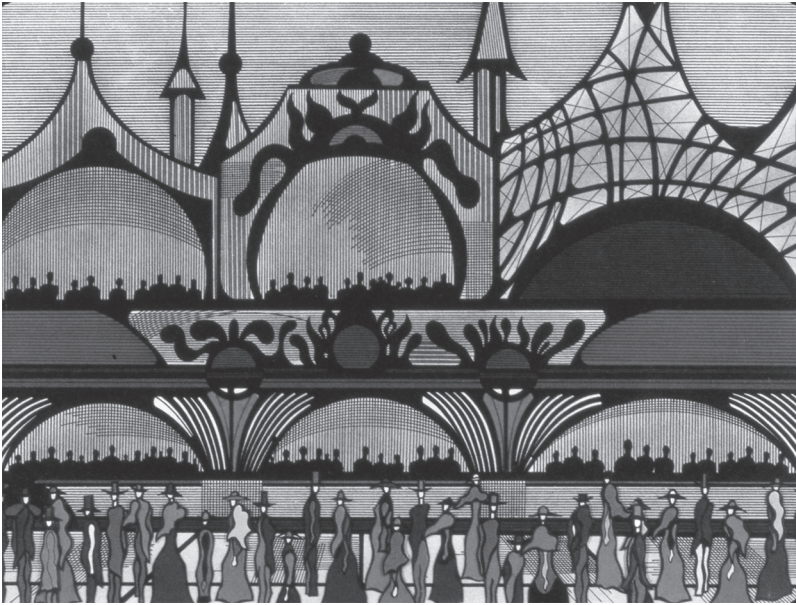
Figure 4. American Cosmopolis in *Expedition Sent to Pacify the Planet Mars in 2895 as Imagined by the Good Old Jules Verne* (1983). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

take pictures to commemorate their success. In the final scene, the men return home on their ship, passing a space balloon on its way to Venus. A stowaway Martian appears ready to start another food fight with a giant cake.

Analysis

Expedition invites an exploration of the mise-en-scène and it does so by integrating the bodies of its actors into its backgrounds (Figures 5 and 6). In the party scene, various figures stand absolutely stock-still, while tears fall from their eyes. The majority of the German bodies are fixed and only their legs move during their exercises. A Martian face turns its head and stares at the camera, its blue body still against the pink background (Figure 7). (In each case, Reisenbüchler employs the third form of montage described in the previous section of *The Year 1812*.) The Martians and Mars become one, as do the Earthlings and Earth. Reisenbüchler again invites the viewer to indulge in cinephilia, as does George Méliès in *A Trip to the Moon*. There are too many details for the viewer to absorb within the film's rapid montage, the phallic ships, the curl of moustaches and the crags on Mars. And thus, Reisenbüchler invents a series of landscapes that absorb bodies and everything else, that can't be fully perceived but can be enjoyed.

 Expedition is set in the science fiction of the past and as such it stands outside of history. The film is as much a fantasy of what film could have become 1000 years after 1895, as much as it is a fantasy of a future in which diplomacy worked and avoided World War I and the horrors of the 20th century. As in *The Year 1812*, Reisenbüchler's images attain the status of icons, representing ideas of American-ness, Russian-ness, French-ness, British-ness, German-ness and Martian-ness. Reisenbüchler's montage and Méliès-an sensibilities allow these icons to escape the political world that birthed them, to become sublime, part of a globalist fantasy, a globalist future.
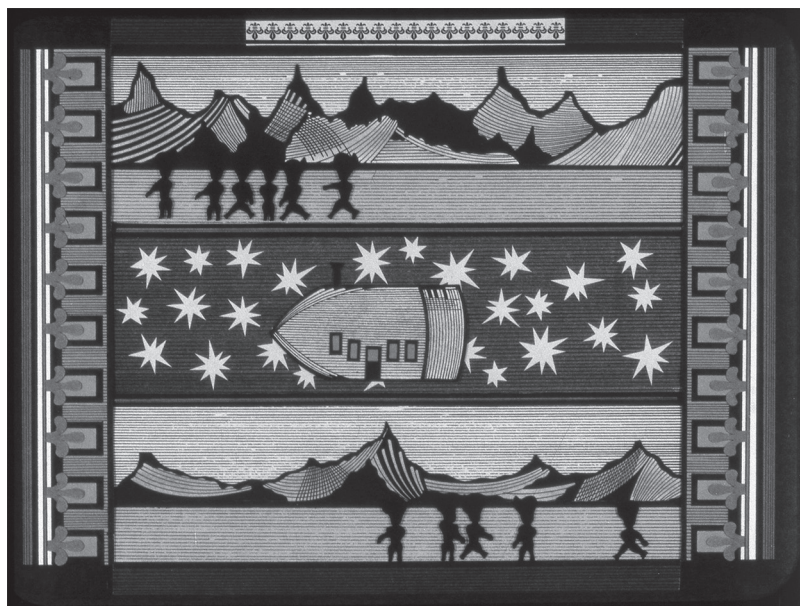
Figure 5. Spaceships and the Martian landscape in *Expedition Sent to Pacify the Planet Mars in 2895 as Imagined by the Good Old Jules Verne* (1983). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

Reisenbüchler and Pannonia

This article has noted Reisenbüchler's relationship to early live-action cinema, and noted how his animated Esperanto differs from the animated Esperanto in well-known animation traditions. It has not placed his work in the context of Pannonia, Hungary's major animation studio in Budapest, with which he remained affiliated throughout his career. Pannonia's animators participated in and were part of many of the anti-Disney animation trends of the 1950s, 1960s and 1970s. They designed their dialogue-less shorts for distribution on the festival circuit in Eastern Europe, Western Europe and North America (Orosz and Keresztes, 2008). They developed their own Esperantos, but their languages emerged from different political philosophies than Reisenbüchler's.

Pannonia is not identifiable with any specific political movement. The studio employed anti-communists, socialist reformers, and those who eschewed politics altogether. The studio's auteurs were not immune to censorship. Marcell Jankovics, the most famous of the studio's animators, could not produce a short film called *The Statue*, which was to be a satire of collectivization and the centralization of authority (Jankovics, 2008). Censorship also appeared at the pre-pre-production level. István Orosz wanted to make a film about the wave of Hungarian migrants to the US following the 1956 Revolution but knew he could not, and therefore he didn't plan the film (Orosz and Keresztes, 2008). For the most part, however, David MacFadyen's (2005: 31) description of Soviet animation, that it 'went about its business in a way that suggests a type of selfhood confounding our expectations of dictatorial cultures' can be said too about the history of Hungarian animation. The studio neither condemned nor encouraged Reisenbüchler's transcendental political philosophy (Tóth, 2008).

Figure 6. French can-can in *Expedition Sent to Pacify the Planet Mars in 2895 as Imagined by the Good Old Jules Verne* (1983). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

Pannonia's films, despite the political differences in the studio, or arguably because of them, emerged from 'goulash communism', the term for the negotiations and re-negotiations between democratic desires and dictatorial power that developed in Hungary in the three decades following the 1956 Revolution.[3] In József Gemés's *Koncertisszimó* (Koncertissimo) (1968) concertgoers watch an orchestra handle artillery as if they were handling musical instruments. (Gemés, 2008, claimed the film had no direct bearing on the contemporary situation in Hungary, but was more a general statement on the willingness of the masses to submit to authority.) In *Gustav and Alienation* (In *Gusztáv elidegenedik* (Gustavus and Alienation) (Marcell Jankovics and Ildikó Sz. Szilágyi, 1976, part of a long series of shorts about a low-level bureaucrat, the hero navigates a lonely Budapest and tries and fails to commit suicide.

These films study the thin line between civilization and barbarism. They suggest that obedience and disobedience to authority involve similar dangers. They study the individual and his continuing struggle with the state, with societal norms and with himself. Reisenbüchler's films do not participate in the same stream of negotiations. They concern themselves with human masses at their most primal. They concern themselves with uncontainable natural forces.

The studio celebrated its auteurs, but placed them in a collaborative environment (Gémes, 2008). It developed a rotation system whereby they would work on each other's films, often as designers, colorists or writers. József Nepp kept a large file of scenarios that he wrote and Ferenc Rofusz's first film was based on a story he took from the pile (Rofusz, 2008). Many of the major auteurs contributed to the *Gusztáv* (Gustavus) series (1964–1977). Although it is possible to locate certain auteurist signatures and techniques in specific Pannonia films, the studio's films, no matter the director, present affinities with each other in terms of stylizations, mood and themes.

Reisenbüchler was an exception to this system. He was affiliated with the studio, but did not work within its strictures due to personal temperament, artistic inclination and circumstance. As a young child, Reisenbüchler contracted a lung infection that affected his health throughout his life

Figure 7. A Martian in *Expedition Sent to Pacify the Planet Mars in 2895 as Imagined by the Good Old Jules Verne* (1983). © Sándor Reisenbüchler. © Hungarian National Digital Archive and Film Institute. Reproduced with permission of the Hungarian National Digital Archive and Film Institute.

and eventually killed him in early old age. Initially, he had ambitions to become an epic live-action filmmaker, an Eisenstein, but his physical limitations confined him to spending most of his time indoors and prohibited him from any rigorous exercise outside. He joined Pannonia, knowing very little about animation and having watched relatively few cartoons. He became a collage animator, constructing his work at home, coming into the studio at most once a month either to collect supplies or to work with a cameraman to shoot his films (Tóth, 2008). He was friendly when he came to the studio but, even then, he remained a unique presence. He sat close to the cameraman throughout the shooting process, directing the camera movements and lighting in particular detail, a practice the studio's other auteurs did not follow (Bacsó, 2008). Reisenbüchler surrounded himself in his apartment with classical music LPs and he called himself a 'kitchen-table animator': 'first came the music', usually one of his LPs, and 'then came the scissors.' During the time he was not at his table, he was reading or watching films, activities which he considered integral parts of his working day (Tóth, 2008).

Reisenbüchler was not indifferent to the work that was produced in the studio. He closely studied the films of György Kovásznai, whose career began roughly 10 years before Reisenbüchler's, who was far more prolific than Reisenbüchler, far more of a studio man, and whose work was far less tightly constructed (Tóth, 2008). In mid-career, Reisenbüchler collaborated with other animators at the studio, particularly Dóra Keresztes, who shared with Reisenbüchler an interest in animating abstract shapes from folk traditions (see Orosz and Keresztes, 2008). Still, he never made his deadlines, and eventually a tacit agreement developed between him and the studio. He would make his own films on his own time and he would earn significantly less than his colleagues (Vajda, 2008). The working days of the majority of the animators at Pannonia followed a socialist riff on the traditional Taylorist model of animation production married, as has been noted, to auteurist tendencies. Reisenbüchler was an independent craftsman, in the tradition of Winsor McCay and Yuri Norstein.

Marcell Jankovics and the animated Esperanto

Marcell Jankovics, the studio's most famous animator, was a Catholic and anti-communist. His father, a banker in Budapest, was jailed in the early years of the communist takeover. Jankovics wanted to study architecture but was unable to do so due to his family's political background and so, in 1959, he took and passed a drawing test and joined Pannonia (Jankovics, 2008). He oversaw Pannonia's in-house animation school and experimented with various anti-Disney movements. For his subjects, he looked to his particular historical moment, as well as Hungarian cultural traditions.

Jankovics, like most of Reisenbüchler's colleagues, spent the majority of his working days in the studio, and thus had to handle the politics of studio management. Reisenbüchler avoided the day-to-day business of a government-supported animation studio, which is another way of saying that he avoided the day-to-day business of politics. The politics of Jankovics's and Reisenbüchler's lives may seem to stand in opposition to each another, and accordingly the politics of their films. Yet, the political grounding for Jankovics's own animated Esperanto has many elements in common with Reisenbüchler's. Many of Jankovics's films communicate a form of Hungarian-ness across political borders, but there's also a hint of globalism within his internationalist language.

Hídavatás (Inauguration) (Marcell Jankovics, 1969) begins as a futurist film. The camera runs along the railings of a new iron bridge, lovingly articulating its contours. The short then transitions, jarringly, into a flat-graphic gag film about an official who dynamites the bridge after he is unable to cut the ribbon at the bridge's opening ceremony. It was, according to its director, about the continuing divide between East and West (Jankovics, 2008).

Jankovics also directed the country's first animated feature film, *János vitéz* (Johnny Corncob) (1972), an adaptation of Sándor Petőfi's 1845 poem, which merged the stylizations of *Yellow Submarine* (George Dunning, 1968) with Hungarian folk art traditions. The film now stands as an artifact of the particular brand of nationalism which served as a form of resistance in 1970s Hungary. Like the original poem, the film invents an alternative globe, upon which its Magyar hero travels through the Hungarian countryside into the Himalayas and the land of the Tatars, to find himself in the Kingdom of France where he rescues the monarch from Turkish occupation. The film both celebrates and satirizes its own nationalism. It ends with its hero's ascension into heaven, escaping the misery of human politics. The *Yellow Submarine* pastels describe a symphony of yellow and white before morphing into a bouquet of flowers set against a black background.

This article has argued that Reisenbüchler's language rests on a dialectic between stillness and movement. *Johnny Corncob* and *Inauguration* suggest that an opposition that has appeared as a binary throughout this article – body/landscape – is also a possible dialectic, and the source for another animated Esperanto. Jankovics endows Johnny Corncob with large feet in order to accentuate his heroic status (Jankovics, 2008). His face is a mask and he wears a rustic Hungarian costume. The bureaucrat at the heart of *Inauguration* is a flat-graphic buffoon. In each example, the body represents a form of human politics, a nationalist ideal in the case of Johnny Corncob, the idiocy of government structures in the case of the bureaucrat. The surroundings, respectively the bright-hued landscape and the majestic bridge, like the landscapes in Reisenbüchler's films, contain the sublime. This article has claimed that internationalism lies in the body whereas globalism lies in the landscape. Accordingly, we can see in Jankovics's body/landscape dialectic another dialectic between internationalism and globalism.

Jankovics's *Sisyphus* (1974) is a significant break from the previous films this article has discussed in that it locates a globalist language, not in landscapes but entirely in the body. Sisyphus is drawn in charcoal against a white background. As he pushes a boulder up a mountain, his body morphs and remorphs, pulsating with his heavy breaths. Sisyphus disintegrates into the lines of a

painter's brush and then becomes a realized human body. He is a small stick figure. He is a muscular Michelangelo outline. The camera's angle is impermanent and places the viewer's own transforming perspective in tension with the transformation of Sisyphus's body. Sisyphus finally reaches the top, places the boulder and then journeys back down the mountain.

There is no clear cultural marker in the short, nothing to suggest that *Sisyphus* is a product of 1970s Hungary. The background is a blank white and the Sisyphus figure, a character from ancient mythology, is reduced at various points to total abstraction. The themes of the film and its emotive essence, a continuing struggle of the individual with himself, is an eternal one. Politics do not define Sisyphus's body.

The globalism of the body within Jankovics's animated Esperanto, unlike Reisenbüchler's globalism of the landscape, is not defined by a dialectical relationship between movement and stillness. His Sisyphus is defined by an inability to remain fixed from one frame to the next. If there is any stillness in the film, it exists within the unchanging whiteness of the background, a canvas upon which the Sisyphus figure struggles to enunciate himself.

This article has located several strands of the animated Esperanto and I would like to delineate them here. The internationalist language, which communicates across political borders, and the globalist language, which transcends them, define and are defined by several dialectics. In the body/landscape dialectic, the body represents internationalism and landscape represents globalism. The globalist language of the landscape is driven in turn by a dialectic between stillness and movement. In Jankovics's animated Esperanto, internationalism and globalism do not exist as a binary but as another dialectic. This article has searched for a globalist sublime in Reisenbüchler's landscapes. In *Sisyphus*, it has discovered a globalist sublime in a moving body.

The animated Esperanto is an unstable language.

Summary and conclusion

The animated Esperanto may be unstable, but this study suggests four rules:

1. The body contains an internationalist language.
2. The body's internationalist language can become a globalist language if the body erases its cultural markers.
3. The landscape contains a globalist language. Cultural markers do not erase this globalism.
4. Internationalism and globalism don't exist in a binary but in a dialectic. Within the globalist lies an internationalist and within the internationalist lies a globalist.

Peter G Foster (1982) has noted debates within the history of the original Esperanto language that parallel this fourth rule: 'Esperantists have tended traditionally to have a lukewarm, even hostile, attitude to governments as sources of support (though this has not invariably been the case)' (p. 9). Many of the dominant forces for Esperanto have argued for political neutrality, leading the movement, at one point, to accommodate itself to fascism, an ideology that abhorred the language. After World War II, Esperantists experienced internal division as to whether or not to align themselves with the United Nations (p. 254). Esperanto organizations had existed throughout Europe almost since its inception in the late 19th century. After World War II, such societies gained governmental support in communist countries and, at times, this support was practical. Cubans, for instance, used Esperanto to communicate with Bulgarian and Czechoslovakian technical advisors (p. 257). Speakers of Esperanto, like the practitioners of the animated Esperanto, included both globalists and internationalists, both in the East as well as in the West. In other words, a globalist/internationalist dialectic drives the history of the original Esperanto language. That dialectic leads its practitioners

to adopt diverse ideologies. And, as we have seen, such a history can be found in the animated Esperanto in particular. It can also be seen in the cinematic Esperanto in general.

The globalist/internationalist dialectic is present even in Balázs's (2010) conception of the cinematic Esperanto. In the introduction to this article, I briefly noted Balázs's dismissal of the 'special ethnographic features, national characteristics [and] local colour, as the ornamental aspects of a stylized milieu', as 'mere *psychological motifs'* (p. 14, emphasis in original). As we have seen, these '*psychological motifs'* are more important than Balázs recognizes, for they help define the internationalist aspect in the cinematic Esperanto. Balázs follows this nod to internationalism with a globalist vision. The cinematic Esperanto, Balázs (2010: 14–15) writes,

> … contains the first living seeds of the standard white man who will one day emerge as the synthesis of the mix of different races and peoples. The cinematograph is a machine that in its own way will create a living, concrete internationalism: *the unique, shared psyche of the white man*. We can go further. By suggesting a uniform ideal of beauty as the universal goal of selective breeding the film will help produce a uniform type of the white race. The variety of facial expressions and bodily gestures has drawn sharper frontiers between peoples than has any customs barrier, but these will gradually be eroded by film. (emphasis in original)

This article has argued that the primary source for a globalist language in animation, with the exception of *Sisyphus*, lies in the landscape. Balázs locates a globalist language within the body, a position that leads him, within the context of interwar eugenics, to white supremacy. Balázs ends by imagining a cinematic future whereby 'man finally becomes visible … able to recognize himself, despite the gulf between widely differing languages' (p. 15).

The internationalist/globalist dialectic and the landscape/body dialectic, by contrast, has no such fixed goal. Animation and the animated Esperanto is concerned with morphing and re-morphing, constant transformation, and as such it avoids the homogenization of the human body. The animated Esperanto resists the rigidity of any political philosophy. The animated Esperanto is an unfinished and unfinishable project. The animated Esperanto is an evolving language, a living language.

Acknowledgements

Notes

1. The definitions of *globalism* and *internationalism* here dovetail with Sandra Hernan's definition of two forms of internationalism. Community internationalists, as Warren F Kuehl (1986:4) explains Hernan's thinking, believed that 'people possess an autonomy of their own and that an interdependency of human beings does exist.' Polity internationalists assume the existence of government and juridical entities. Internationalism has taken on many different definitions and has been aligned with several ideologies, among them socialism. For the purposes of this article, I use *globalism* to describe something adjacent to Hernan's definition of community internationalism, although my definition of *globalism* has more transcendental qualities. I use internationalism simply to define an idea of transnational communication that, as the word suggests, assumes the importance of nation-states.

2. It should be noted that the strains of the political moment did affect Reisenbüchler's life in relatively minor ways. Lower bureaucrats questioned him after he received a visit in Budapest from an English friend he made during a sojourn in London. However, even though such incidents did occasion drama, they did not lead to terrible consequences (Vajda, 2008).

3. From the early '60s, the Hungarian government under János Kádár sought ways to accommodate non-communists. In January 1962, the Party daily published what became a well-repeated quote from one of Kádár's speeches, 'Whereas the Rákosi-ites [the name for the thuggish leaders in Stalinist-era Hungary] used to say "He who is not with us is against us", we say "Those who are not against us, are with us"' (Cartledge, 2006: 492).

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A Tale Humans Cannot Tell: On *Jin-Roh: The Wolf Brigade*

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Abstract

This article explores the interrelated questions of form and identity in the Japanese anime feature *Jin-Roh: The Wolf Brigade*. The film is a reworking of the fairy tale, *Little Red Riding Hood*, set in an alternate Japan which was conquered by Nazi Germany at the end of World War II. The main character of the film is a young recruit to a special police unit named Kazuki Fuse. His inability to kill a young girl carrying a bomb leads to disciplinary action from his superiors, but also draws the attention of the rival division in the police force, which is looking for a way to abolish the special unit. The narrative explores whether or not the traumatized young officer will be capable of using violence to defend himself and his unit. The question of whether Fuse is a rapacious wolf, capable of remorseless violence, or a sensitive victim of trauma converges with the question of the status of the film in relation to its medium. For *Jin-Roh* is a political thriller that, with the exception of one scene, might as well have been shot as a live action feature. Engaging the work of animation scholar Thomas Lamarre on the distinctions between the animetic image and the cinematic image, the article seeks to demonstrate that the question of the film's film can only be addressed by reference to how the narrative resolves the question of the protagonist's interiority. It is the one scene that resists being translated into a live action sequence that holds the key to the enigmatic behavior of the protagonist. Fuse proves fully capable of defending himself against armed men and defeating the conspiracy to destroy the special unit, while remaining a traumatized individual who becomes complicit in worsening his own state of psychic anguish.

Keywords

alternate history, animation, anime, fairy tales, fascism, Japan, terrorism, Thomas LaMarre, violence

> The most subtle of our acts is to feign blindness for the traps that we know are set for us. (La Rochefoucauld)

What distinguishes an animated film from a work of live action? What is the animated image able to achieve that the cinematic image cannot? When is a man not a man, but in fact a rapacious, predatory beast in the shape of a man? These questions – the first pair dealing with the specificity

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of a particular artistic medium and the third concerning the mystery of an interiority that is radi-cally at odds with the physical form that contains it – become entwined in an arresting manner in the Japanese animated film, *Jin-Roh: The Wolf Brigade* (2000), directed by Hiroyuki Okiura and written by Mamoru Oshii. *Jin-Roh* is a gritty political thriller, the imagery of which is character-ized by a meticulous realism, yet its trappings are both fantastic and counterfactual. The film is a reworking of the fairy-tale, *Little Red Riding Hood*, which is furthermore set in a Japan that was occupied not by the US but by Nazi Germany at the end of the Second World War. It seamlessly evokes an alternate historical reality and at the same time unfolds a plot structured by a fairy tale. *Jin-Roh* is able to immerse the viewer in its gritty yet fantastic world in large part thanks to its realistic style of animation. But such attention to realistic detail restricts the capacities inherent in the art of animation, which produces movement by sliding layers of celluloid on a stand. The film thus raises the question of why it is animated at all, when it so faithfully uses the techniques of animation to produce the effects of live action cinema. Indeed, *The Red Spectacles* (1987) and *Stray Dog* (1990), two earlier films centered on the special police unit in *Jin-Roh*, were shot in live action.

In *Jin-Roh*, the predicament on the level of form becomes mirrored in the crisis of identity of the protagonist, who is torn between being a remorseless killer and a sensitive young man trau-matized by violence. Taking on these questions requires an analysis that crosses back and forth between unpacking the film's themes and examining its particular use of animation, so that by illuminating the question mark in the core of the protagonist's psyche, one also comes to recognize how the work can be justified as an animated film. This article will explore this interrelated pair of questions by engaging the work of animation scholar Thomas Lamarre, taking up his distinction between the cinematic image, which evokes three-dimensional depth, and the animated image, in which movement unfolds between the planes and layers of the image and so creates a different viewing position for the audience than its cinematic counterpart. It also relates this formal differ-ence to the manner in which the film resolves the political predicament that befalls the state when it tries to assert control over the violent forces which it has unleashed for the sake of security but which then come to threaten state order itself.

1. Predatory candor, human hesitation

At the end of *Jin-Roh*, a veteran special forces officer declares that he and his men are not human at all, but are in fact wolves in the shape of men. He speaks these words as the protagonist of the film, a junior member of his unit named Kazuki Fuse, strides off to massacre the police officers who are pursuing him and then afterwards to liquidate the female police informant who had been assigned to lead him into their trap. But such a turn of events takes the audience by surprise, since up until this point Fuse has been portrayed as a sensitive and traumatized individual, haunted by the memory of a teenage girl whose death he caused during an operation against an urban terrorist group. The sympathy felt by Fuse for the girl, who was a courier for a terrorist group, had pre-vented him from firing his gun at her before she could detonate a bomb that would cause a power outage across much of Tokyo. After being questioned by a board of inquiry, the young recruit is reassigned to further training as a member of the special police unit known as Kerberos, which was organized to quell a violent anti-government insurgency.

Although Fuse appears to readjust well to the discipline of the training camp, he nevertheless suffers from flashbacks and hallucinations that replay in his mind the encounter in the sewer tun-nels with the girl. Taking part in a training exercise that recreates the conditions of urban combat, he failed to fire his weapon at a critical moment, raising doubts as to both his mental health and his fitness as a security officer. The resolution of *Jin-Roh*, which in Japanese means 'man-wolf',

accordingly presents the viewer with a perplexing riddle – how is it that Fuse, in the concluding scenes of the movie, is able to kill without restraint and without remorse, after failing on two prior occasions to fire his weapon at others or even to defend himself? Does he transform, quietly and inconspicuously, over the course of the film into a lethal predator? Or has he been a wolf all along, having successfully concealed his true nature from the members of the metropolitan police who want to exploit his traumatized condition to abolish the special unit? Does trauma affect a wolf that is in the shape of a human differently from a human who is also human in spirit as well as in the flesh? Or is the knowledge of his true nature something that Fuse attains gradually, after undergoing a sequence of events and undertaking a series of actions? The mystery of Fuse's character – not only the question of whether he is a wolf or a man but also the question of where one identity ends and the other begins – is paralleled on the level of the form of the film. For one could easily argue that there is no compelling reason for the film to have been made as a work of animation. With the exception of a single scene, *Jin-Roh* would have worked just as well as a live-action thriller of political conspiracy and inter-governmental espionage. In unraveling the riddle of Fuse's identity as a wolf, one must also contend with the status of *Jin-Roh* as a work of animation and the question of what relation it bears to the medium itself.

2. The state endangered

Jin-Roh opens with an image that has become iconic in Japanese popular culture – the mushroom cloud generated by the explosion of a nuclear bomb. But in the world of the film, it is the Luftwaffe that lays waste to Japanese cities and drops the atomic bomb. Black and white still images of bombed-out, devastated landscapes give way to a shot of Wehrmacht troops marching down a Tokyo boulevard, followed by an image of a group of children cleaning the hood of an automobile while a soldier wearing the distinctive helmet of the German military, the Stahlhelm, stands guard. Just as the US imposed on Japan a constitution that forbids it from using military forces for purposes other than self-defense, Nazi Germany likewise places heavy restrictions on the activities of the Japanese military and police. The government of the Japan in *Jin-Roh*, much like its real-world historical counterpart, focuses its efforts on recovering from the devastation inflicted by the war. But whereas the historical postwar Japan was able to rebuild its industry and achieve rapid economic development without plunging into the strife brought on by bitter class conflict, the client regime installed by the National Socialists is not so fortunate.

   Anti-government resistance takes hold among many in the younger generation, and violent militant groups soon overwhelm the local police forces. In response to escalating urban violence, the embattled government establishes a special unit called Kerberos to break the anti-government resistance. The officers in this elite force are highly trained, heavily armed, and authorized to use overwhelming force against the insurgents. Sporting the Stahlhelm and encased in black body armor, with their faces covered by a mask with red night-vision goggles, the members of Kerberos look like nothing so much as futuristic versions of the Waffen-SS. As the voiceover tells of how the brutal skirmishes between the special police unit and the anti-government underground have turned the streets of Tokyo into a war zone, the preface closes with a stop-motion sequence of a Kerberos officer executing an unarmed militant in the middle of a street and then turning to confront the camera, his red goggles glowing demonically.

   Fuse is a new recruit to this deadly military unit, and it is hard for the viewer to imagine him performing the harsh and merciless acts for which the special unit has become feared and hated. Indeed, after returning to the training facility, Fuse asks an old friend, Atsushi Henmi, a former member of the special unit who joined its rival, the public security division, for information about the girl who blew herself up. Henmi, after emphasizing to Fuse that he could get into trouble for

sharing the information he has gathered, reveals to his friend where the girl's ashes have been interred. Visiting the mausoleum, Fuse meets a young woman praying in front of the niche containing the girl's ashes. She introduces herself as the girl's older sister, and to Fuse's surprise, speaks with him in a friendly manner. The woman, who is named Kei, declares to Fuse that she does not bear him a grudge because both he and her sister were doing their respective duties, and, moreover, she knows that he did not fire his weapon. Taking a walk together, Kei gives Fuse the book she had intended to leave with her sister's remains, a version of *Little Red Riding Hood* in German. Fuse and Kei become close to each other, as Fuse spends his free time meeting her in various sections of a Tokyo being rapidly rebuilt.

A later scene reveals that Henmi and his superior in the public security division, Muroto, are trying to frame Fuse by falsely exposing him as a traitor working for the terrorist underground. They and several senior officials in the Capitol Police wish to eliminate the special unit because its brutal, heavy-handed methods are increasingly alienating the public. To accomplish their goal, Henmi and Muroto use Kei, a former terrorist herself who was captured by the authorities, to trap Fuse in what they can portray as an illicit love affair between a Kerberos officer and an anti-government militant. By arranging a meeting where they can arrest Fuse and Kei together, the officials behind the plot intend to use the ensuing public outcry over the scandal to force the government's hand so that it will abolish the special unit. The central political conflict in the film is thus not between the authorities defending the existing order and the terrorist resistance that seeks to destroy it, but rather between two modes of organized violence, one that defends state order and the other that is unrestrained in its exercise of force and refuses to be confined by the limits of the law. The latter form of violence is associated with what Deleuze and Guattari (1987: 418) call the war machine, an entity which is exterior to the state and fundamentally destructive of the state form. The war machine, which Deleuze and Guattari trace back to the bands of nomads that evade and defy the encroachments of the imperial state, demonstrates the 'fundamental indiscipline of the warrior, a questioning of hierarchy, perpetual blackmail by abandonment and betrayal, and a very volatile sense of honor', all of which are tendencies and practices that run counter to the 'formation of the State' (p. 358).

The special unit thus constitutes a violent and ungovernable force within the state that threatens the state. The conspiracy undertaken by Muroto, Henmi, and the other police officials to eliminate the special unit can thus be understood as the reflex of the state to rid itself of what Slavoj Žižek terms the 'obscene excess' it generates over the course of enforcing law and order (Žižek, 2002: 27). Kerberos was founded in order to combat an alarming rise in anti-government militancy, but its 'obscene exercise of brutal power' has come to worsen the antagonisms between the state and its opponents (p. 26). The violence of Kerberos has slipped free of the state and its monopoly on violence, threatening to make urban warfare into a permanent condition on the streets of Tokyo. Inasmuch as the enemies of the special unit now attempt to subdue the cruel and inhuman forces that were unleashed for the sake of preserving the security of the state, they would demand the sympathy of the viewer. But the methods of Henmi and Muroto involve deceit, dissimulation, and treachery, the negative versions of the traits typically invoked in humanistic discourse to elevate human beings as reasoning creatures above non-human animals. Indeed, Henmi makes a fulsome show of his friendship to Fuse, hinting vaguely at a possible plot brewing against him in the higher ranks of the public security division and promising to warn his friend if he learns about anything suspicious. After a furtive meeting with the other conspirators, most of whom are drawn from the Capitol Police, Henmi tries to assure Kei that her deception of Fuse, with whom she is falling in love, is justified: 'In every fairy tale where he appears, the wolf has always been the villain. No, you're not betraying a human being.'

3. Variations on *Red Riding Hood*

Henmi, no less than Tobe, the veteran Kerberos officer who disowns his humanity and that of Fuse as well, is convinced that the would-be scapegoat of the Capitol Police is in fact a wolf. He makes confident predictions about the success of his plot to frame Fuse by invoking the ending of the story of *Red Riding Hood*. Henmi portrays himself as the victorious hunter who will trap and slay the predator. Tobe, who had been Henmi's teacher when Henmi had joined Kerberos, expresses a view directly at odds with that of his former student. 'Only in the tales that the humans tell', he contends, 'do the hunters kill the wolf in the end.' The struggle between the public security division and the special unit thus plays out as a conflict of interpretations over the meaning of a familiar fairy tale. For Henmi, the lesson of *Red Riding Hood* is that it teaches the superiority of man over the beasts. The central figure of the story is the hunter who slices open the wolf's belly and fills it with stones, so that he falls down dead when he wakes and tries to flee. When Muroto raises the possibility that there is a secret society within Kerberos dedicated to preserving the special unit at all costs – and that Fuse himself might be a member – Henmi boasts that he will shoot Fuse before he has a chance to 'tear' his throat. For Tobe, by contrast, the moral of the story is that it lacks any intrinsic moral. Man wishes to see himself as the victor in his struggle with the beasts, and so he tells himself stories in which he emerges triumphant over them. Tobe hints darkly, however, that beasts have their own 'stories to weave'. Although one may suppose that the version of *Little Red Riding Hood* Tobe has in mind is one that ends with the wolf devouring the girl, Tobe's oblique allusion to the 'tales' told by 'wolves' conjures up an even more terrifying version of the story, in which the hunter and Red Riding Hood both fall victim to the wolf. The traditional versions of the tale may end with Red Riding Hood being devoured by the wolf or the hunter killing the wolf, but there is no version that concludes with both Red Riding Hood and the hunter being slain by the wolf. Such an ending would in effect produce a tale that humans could not tell, for it would attest to the dissolution of the human world with its restraints and affections into one ruled by predatory violence and remorseless cruelty.

The position of Fuse with respect to the fairy tale is unique, in that he is the only character in the film who refrains from giving his opinion about the meaning of *Red Riding Hood*. Such reticence on his part is to be expected, given the high degree of self-consciousness with which *Jin-Roh*, as hypertext, treats the hypotext of the fairy tale on which it is modeled (Genette, 1997: 5). The girls recruited by the anti-government militants to carry messages and bombs for them are known as 'Red Riding Hoods' within the fictional world of the narrative. The militant who hands the bomb over to the girl who later commits suicide in Fuse's presence even refers to the satchel as a 'gift for your grandma'. The girl is even dressed in a red hooded coat. Fuse thus inhabits a world in which the story of *Red Riding Hood* contains significant explanatory and symbolic power for social and political phenomena, yet he alone seems to behave as though the fairy tale did not apply to him. Although he is traumatized by the death of the girl and suffers from flashbacks and hallucinations, he does not agonize about whether his identity is that of a wolf or a man. Fuse remains steadfastly silent about the internal struggles that wrack his psyche. His identity thus remains a question mark almost to the very end. He is genuinely shocked and horrified when he arrives at the destination that appears predetermined or foreordained by the fairy tale – having become a wolf, or having been revealed as one, he must carry the tale to its end and devour Red Riding Hood. When he stands with his back to a museum display showing wolves, the film presents it as a matter of Fuse's unconscious gravitation toward the creatures, rather than as an active choice or preference on his part. He does, however, read aloud the version of *Red Riding Hood* that he receives from Kei, as though reading the tale without discussing its meaning were the precondition for living out the story.

4. The form of a nightmare

But if Fuse does not talk about his role that the film ascribes to him, his uncertainty over his identity surfaces and becomes manifest in the mute realms of dream and action. The flashbacks and nightmares that torment and paralyze Fuse jolt him out of his normally Stoic demeanor and make visible the nocturnal yearnings and torments otherwise concealed by the light of day. Indeed, the sequence that moves seamlessly from hallucination to dream is one that gives access to Fuse's inner conflicts. It is also, notably, the sole sequence in which the film mobilizes the visual effects particular to the animated image. In other words, the depiction of Fuse's nightmare breaks conspicuously with the film's predominantly realistic style of animation. The fantastic images, aberrant movements, abrupt cuts that make up the sequence would have come across as maladroit and artificial had the sequence been filmed as live action, which is not the case for all the other scenes in the film. The sequence commences with Fuse and Kei on one of their outings in the city. As the couple takes in a view of the city from an amusement park set on a high-rise, a boy running toward them trips and falls. Kei, bending down to comfort the child, asks him, 'Are you hurt?' The phrase causes images to flash in Fuse's mind of Kei lying dead in a pool of blood and being torn apart by machine gun fire, making him gasp with horror. He then hears the words, 'you can't come', and when he turns toward the sound of the voice, he finds himself back in the darkness of the sewers. Wading ankle-deep in the water, Fuse breaks into a run to look for the person who addressed him. A wolf leaps out from a section of a tunnel to follow him, followed by another, until the young constable is accompanied by an entire pack of wolves. When Fuse finally catches up with the girl, he finds her on the other side of an iron gate. He calls out to her to stop, and as she turns to face him, she transforms from the girl who died into Kei herself.

'You can't come with me. You know it's now allowed', Kei tells him. The wolves surrounding Fuse start to growl menacingly as the gate creaks open of its own accord. The predators then pass through the opening and overrun Kei as she tries to flee from them. The wolves leap on her and pull her to the ground, but she already appears to have died before they begin tearing at her flesh and clothes. The film depicts the slaughter in a highly sexualized manner, as the wolves rip away at her clothes to expose naked flesh. Repeated close-ups focus on her legs, which have become splayed open, while blood drips over her bare thighs from the jaws of her killers. An alarmed and agonized Fuse runs toward her body, but then finds himself separated by an infinite distance from the place in the tunnel where Kei's corpse is being ravaged by the wolves. The film then cuts to another scene in the sewers in which Fuse, wearing a calm and focused expression, fires his machine gun at Kei at point blank range. The bullets riddling her body cause her head and limbs to gyrate grotesquely in an obscene dance of death. As Fuse empties his gun into Kei, his comrades in the special unit can be glimpsed at his side watching the bloody scene. They register for the briefest of moments as a disembodied presence, floating in the shadows as it were, and rendered visible only by the red goggles that glow approvingly in the darkness.

Fuse's nightmares and hallucinations reveal the divided inner state that he refuses to put into words. He is agonized by the sight of Kei being devoured by wolves, but the mutilation of her body is depicted in a luridly sexualized way. Her words, 'you can't come with me', bear out that Fuse recognizes deep down that he is embarking on a forbidden relationship by spending time with Kei, but he does not wish to look too closely at the reasons why such intimacy would be forbidden. Moreover, he does not ask himself what the end-point of such a relationship would be, even though, as a later scene reveals, he knows that Kei is being used by Henmi and the public security division to lead him into a trap. The dream sequence brings together a disparate and contradictory array of subjective states in Fuse. The slow-motion shots of Fuse running toward Kei, vainly trying to reach her while she is being dismembered by the wolves, highlights his tormented passivity. The

composed look on his face as he rips apart Kei's body with machine gun fire reflects his resolve to follow orders and his readiness to act with the brutal violence demanded of a member of the special unit. The film then cuts to a horrified expression on Fuse's face, as he cries out in anguish, but it remains ambiguous as to what he is responding. Fuse could be continuing to react to the gruesome spectacle of Kei being ravaged by wolves, or he could be shocked by the sight of himself coolly massacring the woman with whom he is falling in love – in other words, he might be horrified by the lack of horror he sees on his own face. Snowflakes then begin to fall over the Fuse running inside the tunnel, and the fantastic snowfall signals the shift to an altogether different location – a wintry, wind-swept and snow-covered landscape, where a placid Fuse sits surrounded by wolves. The wolves also appear in a state of repose, in marked contrast to the previous scenes in which they glower and snarl at Kei and then mercilessly tear apart her flesh. The Fuse in the tunnel continues to run as he screams out in denial, but the camera then shows his face dissolving into the visage of a wolf that confronts the viewer.

The depiction of Fuse's anxieties and appetites, his hunger and his nightmares, reveal to Fuse the unavoidable future of his relationship with Kei. But the disjointed, fragmented, and ambiguous manner in which they are presented enables Fuse to disavow the act that this same gesture of disavowal will compel him to commit. The viewer is likewise able to retain a sufficient quantity of uncertainty so that the ending will not come off to him or her as predetermined. Fuse does not use his speech to come to a resolution about a bedeviling dilemma, but rather suffers the conflict between his instincts and his affections on the level of his unconscious, that is to say, as the playing out of dim but forceful compulsions against arresting but defenseless sympathies. The need to depict the playing out of these inner conflicts in the nocturnal realm of his sleep results in the only sequence that breaks with the film's realistic style of animation. For with the exception of this dream sequence that appears roughly in the middle of its running time, *Jin-Roh*, with its heightened realism, is a film that need not have been animated at all. It is as though Fuse's confusion over his own identity mirrors the confusion of the film itself as to why it is a work of animation in the first place.

5. The nightmare of form

The question of form in *Jin-Roh* appears at the outset to be a perplexing one. Brian Ruh (2004: 152), in his study of Oshii, points out that the film received criticism for not being a work of live action. Indeed, as mentioned earlier in this article, the two other films set in the Kerberos universe are live-action films. For most of its length, *Jin-Roh* can be considered a work of 'full animation' which depicts humans, non-human animals, and vehicles moving realistically through a meticulously detailed urban setting. As Thomas Lamarre (2009: 32) observes, full animation often seeks to produce the 'sensation of movement into depth' within a 'volumetric 3-D world'. To create the illusion of movement within a coherent and stable reality, the layers of celluloid sheets that make up the art of animation are employed in such a way as to mimic the moving image of live-action cinema. Such a method of animation is quite laborious as it requires a high degree of technical skill and manual virtuosity, as well as considerable monetary expense, to produce convincingly the movement of a body in space according to the conventions of Cartesian one-point perspective. Lamarre emphasizes that the task is not only one of making the body appear larger or smaller as it moves toward or away from the viewer, but also of granting the viewer access to the dynamic perspective of the character as he or she travels through space (p. 20). The technique used in full animation to produce this impression of 'movement into depth' is known as 'volumetric' or 'closed compositing', in which the meticulous elimination of the gaps within and between images generates a world that is 'consistent geometrically and volumetrically' (p. 32). Works of full animation,

such as *Jin-Roh* or more famously, the classic films of Walt Disney, tend toward what Lamarre terms 'cinematism', the kind of movement identified with the 'mobile viewing position of the camera' (p. 34).

Jin-Roh makes impressive use of closed compositing in depicting the movements of its characters. Even in a brief sequence showing an anti-government demonstration, the protesters running away from the police after hurling rocks and Molotov cocktails at them move with a verisimilitude that appears wholly natural and spontaneous, a level of realism which of course can only be achieved by painstaking attention to detail. No less striking is the naturalism of the bodily movements and facial expressions of a girl carrying a bomb in the sewer tunnels when she is startled by the sound of boots splashing the water and runs in the opposite direction. *Jin-Roh* also simulates the conventions of classical cinema, such as the effect of a camera that tracks forward to frame a character's face in close-up while he turns his head in another direction. It is not surprising that an animated film dealing with an alternate reality, taking as its premise historical events that did not actually occur, would attempt as much as possible to heighten the vividness of its characters and the concreteness of its counterfactual setting.

One could even say that the realism of *Jin-Roh* exceeds that of its live-action predecessors, *The Red Spectacles* and *Stray Dog*, both of which resort to absurdist humor and slapstick surrealism to render the agitated and fevered emotional states of their respective protagonists. Indeed, the restrained and understated style of *Jin-Roh* is more effective than the comical and manic approach of the live-action films in evoking both an alternate historical reality and the radical otherness of the subjective position of a protagonist who has given himself over to a life of deadly violence. *Jin-Roh*, by reproducing the techniques of classical cinema on the animation stand, absorbs the attention of the spectator and enables him or her to experience its animated world as realistic and familiar, whereas the live-action depiction of dreams and hallucinations in *The Red Spectacles* proves alienating and defamiliarizing to the viewer. But, as Lamarre implies, the drive to produce the effects of cinematic realism in a work of animation has the consequence of concealing the technical process of animation itself. For full animation operates by hiding the gaps between the sheets of celluloid responsible for producing the impression of movement in the animated image. The 'substantial world' created by closed compositing is accordingly an 'illusion', albeit an expensive one, which moreover stifles the potentialities inherent to the medium (p. 73).

By contrast, what animation makes possible, and what live-action film cannot render, is the 'movement on and between surfaces' which arises from sliding the layers of the celluloid sheets so that they move and diverge from one other. Lamarre calls this type of movement particular to animation – a movement which draws attention to and makes use of the gaps or intervals between the layers of celluloid – 'animetism' (p. 7). Animetism, instead of producing the three-dimensional effect of depth, flattens the image, so that the viewer is made to develop a relation with the image that is not modeled on ballistic perception. Ballistic perception, which is the viewing position of an object accelerating in space, governs the visual habits associated with cinematism and its movement into depth. The flattening of the image – and the opening up of the animetic interval – in much anime is conducive to the contemplation of wonder, as in the films of Hayao Miyazaki, or lends itself to creating environments in which anything can happen, as in the 'limited animation' television series of Hideaki Anno (Lamarre, 2009: 39. 194). In *Jin-Roh*, animetism and its flattening of the image serve a crucial function which eludes cinematism and its movement into depth.

In the key image of the sequence depicting Fuse's nightmare, the viewer sees the protagonist from the back as he runs in the direction of the wolves tearing apart Kei's body. In spite of his exertions, he fails to get any closer to his destination than when he first passed through the opened gate. To highlight the dreamlike nature of the immobility that has overtaken Fuse, the film removes the layers between him and the rapacious wolves. The image places Fuse on the right side of the frame,

Figure 1. Fuse's Nightmare, *Jin-Roh: The Wolf Brigade* (1999). Screen grab from Bandai Entertainment DVD, 2001.

while the wolf pack occupies the center some distance away. But the intermediate layers between them have been darkened or removed, so that it results in an image with two focal points against a black background (see Figure 1).

    The fact that Fuse, despite the vehemence of his efforts, remains rooted in the same spot denies the viewer the feeling of mastery in identifying with a moving body advancing in space. Instead, the viewer ends up scanning the image, alternating between the wolves surrounding Kei's corpse and the back of the distraught protagonist. The flattening of space serves to produce in the viewer frustration and alarm, which together form a state of mind characteristic of those who are incapable of doing anything to avert or resist their doom.

    The inability of Fuse in his dream to reach the wolves serves not only to foreshadow the end of the film, when he is given the order to shoot Kei in order to prevent the public security division from recovering her or verifying her death. It also places in an ominous context the meaning of full animation in *Jin-Roh* itself. For the realist style of animation, which expertly conveys the impression of movement into depth, is in the film associated with the walking or the running body. From the protesters and police confronting each other on the streets of downtown Tokyo to the Kerberos troops hunting the militants in the sewers below, the body in motion is the main focus of the film's realist aesthetic that makes intensive use of the techniques proper to full animation. But, as the brutal massacre that snuffs out the conspiracy bears out, the body that is seen to move convincingly into depth is also one that cannot outrun the bullets fired from a machine gun. In this manner, the film reveals the bullet as both the condition and the hard limit of the ballistic perspective. All the more poignant is it then that the film allows the awareness of this constraint on the ambulatory body to dissipate in the scenes that follow Fuse's nightmare, an extended montage showing the streets of downtown Tokyo bustling with activity. In these scenes, the body moves at a leisurely pace while shopping, commuting, and wandering around the city. A family of three inspects the televisions for sale at an appliance shop, the young son leaping into the air with delight, while a man opens the door of a washing machine and peers inside. Young couples are shown chatting while standing near parked cars, and a vagrant dozes in an alley, resting his arm against a pile of boxes. A boy, walking with his father, turns to look back at a group of demonstrators marching across the street.

This interlude unfolds within a film that Christopher Bolton describes as a 'grimly realistic political thriller', with 'few fantasy elements and no humor' (see Bolton et al., 2007: 144). Yet the images of ordinary life, which present a vivid counterpoint to the subterranean realms of warfare and conspiracy, show a country recovering at last from the ravages of war. The beer commercial playing on the black and white television is crafted with nostalgic affection – the viewer marvels at the precision with which the animators are able to reproduce the low resolution and glare of the early television image. The emergence of a nascent consumer culture in the film is not presented in a critical or disparaging light, but instead highlights the yearnings for a better life among people who have endured the devastation of war and the chaos of civil strife. Having suffered for many years from the war and its aftermath, they are at long last allowing themselves to enjoy the fruits of recovering industry and look forward to a more prosperous future defined by the order and stability that are indispensable for what Thomas Hobbes called commodious living. Indeed, the officials behind the conspiracy to frame Fuse give as the justification for their under-handedness the need to bring about the transition to a more peaceful society, in which the state would rely on laws to govern the people, rather than seek to control them by the threat and deployment of overwhelming force. The violent confrontations of the special unit with the terrorists must end if the terrorist underground is to be discredited in the eyes of a hopeful and increasingly affluent public.

The scenes of ordinary life coax the viewer into the belief that there can be a happy resolution to the relationship between Fuse and Kei. The determined expressions on the faces of the protesters, and the wonder on the face of the boy who looks at them underscores the prospect that another world is within reach, a world other than the grim and humiliating condition of being controlled by authorities who have been installed as the puppets of the occupying power, Nazi Germany. The irony here is that this peaceful and melancholy sequence, suffused with the collective yearning for a better life, is rendered in an animation style that reproduces ballistic perception, which Lamarre (2009: 38), following Virilio, associates with the drive to 'dominate and exploit' the world. One could of course point to the central role of domination and exploitation in the expansion of the capitalist market that would deliver concrete and visible improvements to the standard of living, but such an explanation loses its force in light of the fact that the scenes of urban combat are also rendered in accordance with the 'hegemonic visual regime of perspectivalism' and its privileging of movement into depth (p. 27).

The sequence of Fuse's nightmare, by contrast, demonstrates the flattening effect that Lamarre identifies as proper to the art of animation, yet the revelation of the animetic interval in *Jin-Roh* appears to be the omen of an irreversible fate. The scene in which Fuse is immobilized while the wolves devour his beloved does not evoke the sense of 'awe and wonder' that Lamarre argues is the principal effect of the key animetic sequences in Miyazaki's films, nor does it liberate the character from the 'unity of space of an image' and enable him to jump across 'multiple fields of action crisscrossing the image', as in the style of limited animation employed by Hideaki Anno (pp. 38, 195). Instead, the sequence showing Fuse's nightmare highlights his immobility and helplessness as he is confronted by the fate that his commitment to his duty and his attraction to the girl have set in motion. Lamarre prizes the animetic image because it provides an alternative mode of vision to the Cartesian perspectivalism of the cinematic image and its attendant drive for mastery and domination. But in *Jin-Roh*, the moment where the film breaks with the movement into depth associated with ballistic perception would yield the helpless contemplation of a cruel atrocity, or in other words, it leads to an immobilized viewing of the domination and mastery in which the instrumentalized form of perception associated with cinematism is understood to culminate.

Such an interpretation would hold if one were convinced that Fuse is a beast from the outset, and thus lacks any free will. If we take the view that he is in fact human, or partly human, then his nightmare takes on an altogether different significance. In this case, the dream would constitute a

warning to Fuse that there is a terrible price to be paid if he persists in fulfilling his duties. He has the choice not to follow through on the instructions given to him by the wolf brigade by granting Kei's wish for them to run away together. Thus, rather than anticipating Fuse's fate, or sealing him within it, the nightmare, unsettling though it is, in fact represents the moment that Fuse comes closest to freedom, especially when one considers the film from the vantage point of its ending. The dream gives him the chance to feel horrified by what he will be ordered to do, so that he may find a way to avoid doing it. The sight of Kei's death drives home the possibility that there are fates worse than his own death. The animetic interval accordingly does not cease to expose the cinematic movement into depth as productive of a sense of mastery that is both false and, in the particular case of the alternate reality of the film, premature. Cinematism in *Jin-Roh* may give body to the hope for another world, but the mastery of the civilian body over its environment, however peaceful and desirable, proves to be illusory. Animetism, by contrast, emerges in the film as a more profound mode of revealing, as it brings to light the forces that remain unrepresentable to ballistic perception as well as it exposes the illusions produced by movement into depth.

6. The sacrifice of hope

If society itself is becoming more peaceful, and ordinary life is beginning to return, what reason could there be for the romance between Kei and Fuse to end tragically? Perhaps like Fuse himself, the viewer is more likely to lose himself or herself in the comforting and reassuring sights of his transformed surroundings than to dwell on the gruesome images of his nightmare. Kei's confession to Fuse that she was a militant who was captured by the police also raises the hope and the expectation that Fuse will find a way to save their lives. Kei speaks of resigning herself to her fate after she had been arrested by the authorities, but in getting to know Fuse, and sensing that he is a wounded spirit like herself, she finds the determination welling up within her to live again:

> I was arrested and taken to the Capitol Police public security division. I didn't care any more, not then. I agreed to everything they asked me to do. In a way, it almost seemed comforting. It became such a chore having to think all the time. I thought it best not to have to think about anything, or so I told myself. But when I am with you, I somehow feel that I am hurting myself. And when I see the same sadness in you, I start to dream, I wonder why.

The monologue gives way to a passionate kiss between the couple. But Fuse declines Kei's proposal that they run away, 'go somewhere far away' together, telling her that there is unfinished business he must take care of 'first'. The couple then descends again into the sewers, where Fuse is met by Tobe and other members of the 'Wolf Brigade', a secret society within Kerberos dedicated to protecting the group from its political enemies. Fuse's comrades arrive carrying his body armor and machine gun. While they help him put on the protect gear, Tobe explains to Kei that he and the others in the Wolf Brigade have known about the plot since Fuse gave his testimony to the board of inquiry. The counter-measures he and his superiors have prepared will catch the conspirators by surprise and force the public security division onto the defensive.

As Kei looks on as the sensitive young man she loves is transformed into a killer encased in metal, Tobe announces to her that she will soon see the 'real Fuse'. Tobe declares that Fuse, like the other members of the Wolf Brigade, is not a 'man' at all, but 'wolf disguised as a man'. Once Fuse is fully dressed and his fire-arm loaded with ammunition, with the mask and glowing red goggles covering his face, he points his machine-gun at Kei as a kind of menacing salute (see Figure 2).

The act of putting on his armor and equipping himself with his machine gun reveals the nakedness of Fuse's being: he is now fully the predator against whom it is impossible for all-too human

Figure 2. Fuse turns to face Kei and Tobe, *Jin-Roh: The Wolf Brigade* (1999). Screen grab from Bandai Entertainment DVD, 2001.

powers to prevail. Fanning out with the other members of the secret society into the tunnels to lay an ambush for the hapless police, Fuse and his comrades catch the officers, led by Henmi, wholly off-guard, as the latter arrive expecting to hunt down a single unarmed man. Instead, they find themselves completely outgunned in a firefight led by a fully-armed and equipped member of the special unit. In an extended sequence that mirrors an earlier firefight in the film where the special unit wipes out a band of urban guerillas, the police officers now become the prey of a merciless predator, their limbs flailing in fatal convulsions as they fall victim to Fuse's machine gun.

Fuse, in returning to the sewers to rendezvous with his fellow members of the Wolf Brigade, confirms the belief of Tobe that he would fulfill his duty to the special unit in spite of the trauma that he has undergone. When a superior asks Tobe if Fuse can be trusted to fight against the threat to Kerberos, Tobe gruffly replies, 'once a beast, always a beast'. What is it that makes Tobe so certain that Fuse, who twice fails to fire his weapon at his adversaries, will inflict lethal force against the police who are trying to destroy the special unit? The stoical officer is not a metaphysician who requires iron-clad certainties in order to work out a course of action. Rather, Tobe is a strategist who recognizes that knowledge will always be limited, and thus that to take action successfully, one is obliged to make wagers on a certain set of outcomes. Thus, Fuse's vulnerability is not feigned but real, and Tobe's strategy, as it turns out, takes into account his pupil's weakness, using it as the bait to draw in the enemies of Kerberos. His plan accordingly exemplifies the strategic maxim from Akira Kurosawa's *Seven Samurai* that every fortress needs an opening. In other words, one should deliberately leave lightly defended a gap toward which the enemy, believing it to be a weak point, will direct their efforts. Fortresses that are impregnable, and plans that are iron-clad, on the other hand, leave a commander without the capacity to predict the future course of the battle or to influence its momentum.

Tobe recognizes that Fuse will be reluctant to fire on a young girl or at his own instructor – the role of the enemy in the drill where Fuse fails to attack is played by Tobe himself. But the teacher also surmises that his student will have no reservations about defending himself against armed men who are seeking to kill him, a recognition that comes too late to Henmi, when, wounded by Fuse

and about to be slain by him, he groans, 'Fuse … you knew what to do all along without being told.' But although Fuse is revealed to be a beast by Tobe, Fuse's transformation into a predator, or the discovery of his own nature as a predator, is not complete until he performs one last act that will tie up the last loose end of the operation. After the hunters have been vanquished, the group drives to a junkyard. A member of the secret society approaches Kei, presumably to kill her, but Fuse inserts himself between them, giving the would-be assassin a threatening look. Tobe then gestures to the assassin to back off, and reminds Fuse about what still needs to be done – the only way for the special unit to protect itself is to ensure that the public security division never recovers Kei or is able to confirm her death. Fuse balks at the implications of Tobe's words, but the veteran officer reminds the younger man that he has already crossed an irrevocable threshold. Fuse may leave the pack and live among the humans, but to do so now would be to betray the identity that he has fixed through his deeds:

> even if a wolf takes the guise of a man, and lives among them, he can never be truly human, just as the crimes of that girl, who carried bombs that took the lives of many people, cannot be erased.

Tobe hands Fuse a pistol, telling him it is time to 'end the tale of the beast that gets involved with a human'.

Although Fuse has performed his duties superbly, he is made aghast by the order. The act of killing the police officers and his treacherous friend Henmi takes on the additional significance that he failed to anticipate – it was not only an act of self-defense, both for himself and for his comrades, but also, more profoundly, a process of initiation that binds him even more deeply to the pack to which he believed he already belonged. The last step in the metamorphosis of man into wolf is the most agonizing of all, as it demands that he take the life of the woman he loves. Tobe had earlier spoken cryptically to Henmi of the 'pain' that beasts are forced to 'endure', and the time for the agony foretold in his dream has now arrived for Fuse. The anguished look on his face underscores the tortuously partial nature of his transformation (see Figure 3).

The moon can be seen above the young constable's shoulder in another close-up shot centering on his agonized expression. But for once, Fuse has to be told what to do. 'This is the moment where you must end the tale of the beast that gets involved with the human', says his mentor, 'Put an end to it now while you're still a beast.' While a sniper watches from a nearby shack, Kei throws herself into Fuse's arms, quoting the lines from the fairy tale in which Riding Hood asks the wolf about his large eyes and sharp teeth. Fuse's face becomes contorted with anguish, and he shuts his eyes as the noise of a single gunshot rings out across the dawn. Kei tumbles almost gently to the ground, while Tobe speaks the final line of the film, weaving the tale of the beast: 'and the wolf … ate up Little Red Riding Hood.' One feels almost a kind of Pyrrhic relief in that Kei does not die in the horrific manner depicted in Fuse's dream.

The film thus arrives at the inhuman destination hinted at by Tobe, as it ends with the wolf killing the hunters and Red Riding Hood. But while the unimaginably dark interpretation of the tale is the one that wins out, it is also the case that Kei's own interpretation of the tale is less wishful and more severe than the viewer expects. For when Fuse disappears into the tunnels to slaughter the police officers, Kei runs after him but falls to her knees in tears, calling out to him, 'If only we could both have died together … at least I know … I would have had a place in your heart.' Kei may have allowed herself to feel the hope that she and Fuse could somehow live together as a couple, but her remarks about wanting to be like a bird and to fly away from the city ultimately reveal that she knows there is no escape from the subterranean world of treachery and massacre. Yet her own version of Red Riding Hood proves to be almost as strange as that of Tobe – she hopes for the tale to end with Riding Hood and the wolf dying together, being slain together by the

Figure 3. Fuse feels the pain of the beasts. *Jin-Roh: The Wolf Brigade* (1999). Screen grab from Bandai Entertainment DVD, 2001.

hunters. Such an ending can be grasped as utopian, for it would come about as the consequence of the conspiracy succeeding in its effort to eliminate Kerberos. The most that Kei allows herself to hope for corresponds, strikingly enough, to the end to the condition of terror imposed by the constant threat of predatory violence.

Conclusion

Jin-Roh begins with an elliptical subtitle: 'This thing is like a wolf. This thing is a wolf. Thus, it is a thing to be banished.' The phrase calls to mind the observation of Giorgio Agamben (1998: 104) that the figure of the werewolf designates the man who was banned from the city, the bandit, 'who is precisely *neither man nor beast*, and who dwells paradoxically within both while belonging to neither'. For Agamben, the designation of an individual as a werewolf means that it is not a crime for the citizen to kill such a being because he is condemned as an enemy of the city and its laws. The politics of modern sovereignty, however, exposes all citizens to the possibility of being subject to the ban, of being treated as a 'sacred' being, or *homo sacer* (p. 111). *Jin-Roh* provides a vital supplement to Agamben's thought, as well as a sober reminder of its limits. Just as there are individuals who can, in Agamben's words, be killed but not sacrificed, there is also a kind of violence that kills but refuses to sacrifice. In the film, this is the violence of Kerberos and the Wolf Brigade, which is unbounded and enforces a state of terror.

   Kei's resignation to her fate leads her to a readiness to die for the sake of love, a death which, had it been able to rise to the level of sacrifice, would have made possible the passage out of the world of inhuman, subterranean brutality into one where humans would no longer be at the mercy of the wolves in whose cruelty and viciousness they have sought protection. For what sacrifice signifies is transformation of violence into a founding act that brings about the shift to another order – sacrifice is the act of self-abandonment that makes possible another world. It is thus telling that Agamben defines the concept of *homo sacer* against sacrifice, for it points to the vicious circle whereby violence in the contemporary world has become futile and ubiquitous, deprived of any power to establish a lasting order. While it would be reductive to read *Jin-Roh* as an illustration of the nature of violence in the contemporary world, its counterfactual history draws unnervingly

close to our own present in the form of the protagonist who refuses sacrifice. What the flattened surface of the animetic image exposes – and what the cinematic image is incapable of representing – is the divide within Fuse's psyche that ultimately rejects his sacrificial death alongside Kei. She is reduced to the status of an anonymous victim devoured by wolves, rather than becoming a sacrifice that enables the state to awaken from its nightmare. Fuse, for his part, dooms himself to a life that is not worth living, but such a view of his fate remains tenable only so long as one is capable of dying like a human rather than living like a beast.

Funding

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